AIHce2011

The Premier Conference & Expo for
Occupational & Environmental Health & Safety Professionals

2nd International Symposium on Wood Dust + May 17-18, 2011

Final Program
The Ventis Diner is proud to serve up safety all day, every day. Established in 2011, the Diner’s already famous Ventis MX4 multi-gas detector perfectly satisfies those cravings for a small, reliable instrument.

The Ventis Special

- 1 to 4 gas monitor - O₂, LEL and 2 toxic gases including CO, H₂S, NO₂, SO₂
- Standard or extended range battery
- Powerful sampling pump - up to 100 feet
- High-visibility safety orange or black overmold
- iNet®-ready instrument

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Ensure greater workplace health and safety compliance with 3M™ Versaflo™ Respirator Systems – a new range of remarkably comfortable powered and supplied air respirator systems that help to protect your employees against multiple hazards.

Versaflo™ Systems feature a wide selection of lightweight headgear with adjustable airflow and suspension. The new 3M™ Versaflo™ TR-Series Powered Air Purifying Respirators (PAPRs) are exceptionally compact, ergonomically correct and interchangeable with all Versaflo™ headgear options.

The modular approach and versatility of Versaflo™ Respirator Systems allow you to configure a system tailored to your industry, application and individual comfort preferences, and provide an integrated solution to your workplace respiratory protection needs.

Visit 3M Booth #1725 to see how you can WIN an iPad®.

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Breaking the limits of gas detection.

Introducing an entirely new approach to gas detection: the X-zone® 5000.

There’s a fundamental limitation in traditional gas detection methods. Traditional portable gas detectors provide mobility, but don’t communicate. Traditional fixed gas detectors communicate, but aren’t portable. The X-zone breaks these limitations by combining the mobility of portable systems with the communication of fixed systems. The result is a level of safety and security unmatched in the industry. This new solution provides flexibility in many applications — from performing confined space entries and area monitoring, to setting up wireless fence lines, to connecting auxiliary safety equipment and transferring alarms to standby attendants. With the X-zone, the limits of gas detection are now history.

SEE THE DRAEGER X-ZONE 5000 IN ACTION AT WWW.DRAEGER.COM/X-ZONE.
Welcome to AIHce 2011 and to the beautiful city of Portland! Get ready for a week of interactive sessions that will leave you equipped with ideas and solutions to bring back and apply immediately to your everyday work. AIHce 2011 is your opportunity to step back from everyday demands and focus on your most important asset — your professional development.

First time benefits add even more value to your registration!

• New! Complimentary International Symposium on Wood Dust. Learn more on page 53.
• New! AIHce On Demand — full access to the Technical Program. Details on page 28.
• New! Lunch included with Full Day PDCs

If you have any questions during the week, stop by Registration or ask any AIHA staff member who will be happy to assist you.

Enjoy your week!

INNOVATE

*(vb)* to introduce something new; to invent or begin to apply methods and ideas

Innovative sessions, speakers, products and displays will refresh your skills and renew your expertise.

INTEGRATE

*(vb)* to unite or combine

Integrate current experience with new specialty areas by choosing from sessions that span over 40 topics.

INSPIRE

*(vb)* to influence or impel

Be inspired by dynamic speakers, fresh faces, hundreds of new products in the Expo and robust education.
Discover Portland

Using the same proven technology, the Quantifit takes accuracy, speed, and reliability to a new level.

- Complete a fit test in 3 minutes or less!
- The only system that can do fit test as well as mask integrity testing
- Test individuals in their assigned facepiece
- The ability to challenge the mask at extremely high work rates (user selectable)
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- USB PC interface includes software
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- Smaller, lighter and quieter instrument
- Sleek new look with improved on-board software
- Optical knob for easier menu navigation
- World-wide universal power connection

The new Optimus from OHD ensures you will never lose a measurement again because it measures everything at the same time!

- Measures everything at the same time
- Voice tag audio notes
- Audio recording of noise source
- Real-time Octave Bands
- High resolution color screen
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Visit us at booth 1612!

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- Air Quality Monitors
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- And Much More!

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Virtually Metal Free
All FumeGard™ cabinets are virtually metal free and do not use nylon components. "Double Wall" construction forms the plumbing chase for the routing and connection of all services required. This compartment is constantly under negative pressure to minimize any fume build up. Access panels are provided for front maintenance of HEPA filters, services, electronics system, and view screen counterweight balance system. Hinges, handles, screws, bolts, sinks, and miscellaneous items are also constructed of polypropylene.

Designed to Capture, Contain, and Exhaust
NuAire's HEPEX™ Zero Leak Airflow System maintains quiet uniform airflow. The HEPEX™ System also prevents uneven particulate loading by eliminating direct blower blasts to the HEPA filter and dispensing air over 100% of the HEPA filter surface.

Have a smartphone?
Scan the code to and stay up to date on the latest information.
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Local Conference Committee
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Technical Tours
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Ronald Tubby, MBA, CIH, CSP

Community Service
Steven Eversmeyer, CIH, CSP, Scott Turkle, CIH

Promotion
Stephanie Carter Miller, PhD, CIH, Illa Gilbert-Jones, CIH, CSP,
Kermit McCarthy, CIH, John Miller, Dorothy Montgomery, CIH,
Scott Turkle, CIH

The LCC, in partnership with AIHA, works to organize and execute an outstanding AIHce. A special thanks to all who donated their time throughout the year to make this year’s conference memorable.

Thank you to the following volunteers for their time and expertise in assembling the 2011 program.

AIHA® Board of Directors
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Executive Director, Peter J. O’Neil, CAE
AIHce 2011 is headquartered at the Oregon Convention Center (OCC). Education sessions, the Expo, and most committee meetings are scheduled at the OCC. The majority of evening social activities are located at the Hilton Portland.

AIHce Information
OCC, Holladay Lobby + (503) 963-5757
Contact AIHce staff for general information. Paging and message services are not available.

OCC Information
M.L. King Jr. Lobby
Visit the Welcome Center for assistance with directions in and around the center and for general information on Portland including transportation, shopping and restaurant recommendations.

AIHce On Demand
With the conference recordings from AIHce 2011, you can now reach your educational goals quickly with this library of information available online 24/7. Take advantage of the following:

+ Audio synchronized to presentation slides
+ Downloadable MP3 files and abstract presentations
+ Up to 250 hours of recorded educational content

Stop by the AIHce On Demand booth in Lobby C today!

*price increases to $225 immediately after AIHce. If you registered at the Premium Registration rate in advance, AIHce On Demand is included — no need to purchase.

Airport Transportation
Blue Star Shuttle offers a shared ride van service between Portland International Airport and downtown hotels. AIHce’s per person discounted rate is $11 one-way or $22 round trip. When purchasing a ticket, indicate “AIHce/Industrial Hygiene Conference.”

Blue Star Shuttle will pick up passengers going to PDX from the Convention Center provided 24 hour notice is given. To make a reservation, visit http://www.bluestarbus.com/downtown-express.php or call (503) 249-1837.

Taxi fare from downtown Portland to the airport is $35-45, plus tip. If you wish to take a cab to the airport or around town, it’s best to call ahead. A limited number of cabs are available “on the street.”

AIHA International Reception
Each year, AIHce welcomes registrants from around the world. International professional members are invited to join other international colleagues on Monday night for this event. Admission by invitation; international badge required.

Sponsored by Galson Laboratories

Expo Highlights
OCC, Halls B–E
Monday 9:00 a.m.–5:30 p.m.
Tuesday 9:00 a.m.–3:00 p.m.
Wednesday 9:00 a.m.–1:30 p.m.

It’s all happening at the Expo—the place to browse more than 300 exhibits, relax, dine and meet with colleagues. Each day features Expo-only hours affording time in the Expo between sessions.

+ Expo Theater
+ Clandestine Drug Lab Exhibit
+ Expo Opening Cocktail Reception—don’t forget your drink ticket
+ Passport to Prizes + Daily Prize Drawings
+ Cyber Cafe + Networking Lounges
+ Web and Software Showcase
+ University Row
+ Technical and Student Posters
+ Monday, Tuesday and Wednesday Luncheon Discussions
+ Restaurants

AIHA® and ACGIH®
AIHA InfoCentral, Booth #913
The place to be — AIHA’s InfoCentral! Take advantage of 15% off AIHA publications and education (AIHA members enjoy free shipping!) and check out these titles debuting at AIHce:

+ The Occupational Environment: Its Evaluation, Control, and Management, 3rd edition
+ Industrial Hygiene Reference & Study Guide, 3rd edition
+ 2011 ERPG/WEEL Handbook and Update Sets
+ Monitoring for Health Hazards at Work, 4th edition

Special book signing! On Monday at 10:00 a.m., Opening Session keynote speaker, Gene Kranz, will be at the booth signing his book, Failure Is Not an Option: Mission Control from Mercury to Apollo 13 and Beyond.

View the newly updated www.aiha.org and get information about membership, upcoming events and other AIHA products and services.

Visit AIHA’s InfoCentral for special events, giveaways, hot new products and much more!

The ACGIH Pavilion, Booth #641
Staff will demonstrate how ACGIH defines the science of occupational and environmental health by showcasing the member benefits, outstanding publications and software, and upcoming continuing education courses and webinars for which ACGIH is renowned. Information regarding The Action Level®, our at-home, self-study continuing education course, the Foundation for Occupational Health and Safety (FOHS), and the Foundation’s Sustainable TLV®/BEI® Program will be available. Please stop by and see us!

Poster Sessions
OCC, Hall B
More than 100 technical and student papers present the latest findings in OEHS. Posters are displayed 9:00 a.m., Monday, through 1:00 p.m., Wednesday. Authors are present during specified times to discuss their research. See p. 90.
Luncheon Discussions
OCC, Hall D
Luncheon Discussions are small conversational groups facilitated by AIHA Members and NIOSH researchers and technical staff. Discussions focus on current issues, trends, relevant topics and research. Purchase lunch from a concession and choose your discussion. Seating is limited and available first-come, first-served.

Student and Early Career Professionals
Monday, 12:30 p.m.–1:30 p.m.

NIOSH Table Talks
Tuesday, 12:30 p.m.–1:30 p.m.

Volunteer Group Tech Talks
Wednesday, Noon–1:00 p.m.

27th Annual AIHF Fun Run/Walk
Tuesday, 6:30 a.m.–8:00 a.m.
Waterfront; meet at Ankeny Pavilion
MAX Light Rail Stop: Skidmore Fountain (Red/Blue lines)
Lace up your running shoes and support the work of the AIHF. Run 5K or walk 2K—all are welcome! New and advance registered participants must stop by Registration to check-in and sign a waiver by 5:30 p.m. on Monday. The on-site fee is $40. No check in or new registrations accepted at the race site.

Sponsored by Scott Safety

AIHce Pin
Add bling to your badge and support the AIHF by purchasing the AIHce 2011 pin at Registration, the AIHA booth or the Volunteer Collaboration Café. Wear it to show your support throughout the conference week!

Annual Blood Drive
OCC, Room A103
Monday 10:00 a.m.–3:00 p.m.
Although walk-ins are welcome, you are encouraged to make an appointment early in the day to reduce the wait time. Random cash prizes of $250, $150, and $100 will be awarded; be sure to swipe your Expocard at the door.

Sponsored by AIHA’s LCC and administered by the American Red Cross

Business Centers
OCC, Level 2
Limited, self-service; credit card only.

Hilton Portland + (503) 226-1611 ext. 2142
Monday–Friday, 8:00 a.m.–4:30 p.m.
Self-service available 24-hours a day; credit card or room charge only.

CareerAdvantage Development Fair 2011
OCC, Hall A + (503) 963-5754
Monday 8:00 a.m.–4:00 p.m.
Tuesday 8:00 a.m.–4:00 p.m.
Wednesday 9:00 a.m.–4:00 p.m.

For those registrants actively seeking employment, the CareerAdvantage Development Fair has always been the place to search and apply for open OEHS positions online. Even if you aren’t currently looking for a new job, you’ll want to increase your marketability as a job candidate for the future. See page 23 for the list of scheduled events.

Employers seeking to fill an open position, stop by and quickly post your jobs online; candidates will be able to view your position immediately. You can also search through online resumes and select from hundreds of qualified OEHS professionals. Visit the Development Fair in Hall A to find out more.

Children
Children and young adults 18 and under are not permitted in courses or in the Expo during move-in/move-out. If accompanied by an adult, children are permitted in the hall during regular Expo hours. A name badge is required and will be provided no charge.

Coat/Luggage Check
OCC, Hall A + Saturday–Thursday, 7:30 a.m–5:30 p.m.
Non-valuable items may be left at owner’s discretion; AIHce is not liable for lost articles. Small fee may apply.

Cyber Café
OCC, Lobby E
Saturday Noon–5:00 p.m.
Sunday–Wednesday 7:00 a.m.–5:30 p.m.
Stay in touch with home and office, see who is registered for AIHce or peruse the AIHce website. Complimentary messaging and internet access is available throughout AIHce. Twenty additional terminals are located in the Expo and are accessible when the Expo is open. On Thursday, computers in Lobby A will be available until 1:00 p.m.

Sponsored by Scientific Analytical Institute, Inc.

First Aid and Assistance
OCC, Lobby A (adjacent to Registration)
A first aid station is staffed daily, Saturday through Thursday.

Lost and Found
Check-in Kiosk, Holladay Lobby + (503) 963-5757
Kindly bring articles left behind in meeting rooms or the Expo to the Kiosk.
### MSA/AIHA® Reception

Everyone who is anyone will be at this must-attend annual event held on Tuesday evening at 6:30 p.m. at the Hilton Portland. Plan to attend!

*Jointly sponsored by AIHA and MSA.*

### Press Room

**OCC, D132  +  (503) 963-5756**

- Monday–Tuesday 7:30 a.m.–5:00 p.m.
- Wednesday 7:30 a.m.–3:00 p.m.

Members of the media are invited to register for AIHce in the Press Room; proper credentials required. The press room offers exhibitor media kits, Internet connections and areas to network and conduct interviews.

### Registration and Hotel Reservations

**OCC, Lobby A  +  (503) 963-5753**

- Friday 4:00 p.m.–6:00 p.m.
- Saturday–Tuesday 7:00 a.m.–5:30 p.m.
- Wednesday 7:30 a.m.–4:00 p.m.
- Thursday 7:30 a.m.–10:30 a.m.

To register as a member, individuals must have satisfied all the requirements of membership and paid dues in full prior to AIHce.

Registrants must wear name badges to be admitted to technical sessions and to the Expo. Courses, tours, AIHF activities and selected social activities require a ticket. The deadline to cancel a ticket and receive a refund was April 27. No refunds will be issued on-site; once tickets are purchased, fees are not refundable. Course ticket exchanges are permitted.

Professional registrants receive the Final Program, Addendum, and Lanyard. Booth personnel receive a copy of the Final Program.

After one initial re-print, there is a $5.00 charge for lost badge and ticket replacement.

*Lanyards provided by Sensidyne, Inc.*

### Speaker Ready Room

**OCC, C124  +  (503) 963-5760**

- Saturday–Tuesday 7:30 a.m.–5:30 p.m.
- Wednesday 7:30 a.m.–6:30 p.m.
- Thursday 7:00 a.m.–4:30 p.m.

Staff is available to answer general questions and distribute ribbons and expo hall passes for poster sessions. Computer workstations, LCD projectors and microphone training are also available.

*Speaker Ready Room check-in:*

- Mandatory for all Technical Session (Podium, Roundtable and Crossover) presenters, moderators and monitors, 30 to 60 minutes prior to the start of their session. Presenters are required to confirm recording permissions and to meet with an audiovisual technician to ensure presentations are compatible with session equipment.
- Only AIHce-supplied computers may be used in technical sessions.
- Not required for PDC instructors; however, instructors are welcome to use the room to prepare presentations. AIHce does not provide computers to course instructors.

### Technical and Social Tours

**Depart from M.L. King Jr. Lobby, Mezzanine**

Registrants participating in a technical or social tour should be in the lobby fifteen minutes prior to the published time of departure.

*All Technical Tours are sold out through advance registration. If you are interested in a technical tour, check at Registration to see if any ticket holders have turned in tickets for re-sale. Social Tour tickets are still available for purchase.*

### Volunteer Collaboration Café

**OCC, Lobby C**

- Sunday–Wednesday, 7:30 a.m.–5:00 p.m.

Stop by the Volunteer Collaboration Café — an interactive spot designed for networking with colleagues and learning about AIHA volunteer opportunities. See page 24 for details.

### Where to Eat

Outlets located in the Lobbies offer beverages, sandwiches and light snacks. Restaurants in the Expo are open Monday through Wednesday and serve a variety of options. Many of Portland’s downtown restaurants are just a short light rail ride from the OCC; check with staff at the Visitor Center for recommendations.

### Wireless Lounges

Two wireless internet lounges are available in Ginkoberry Concourse and Lobby E and are open daily.

### PDC Luncheons

Light lunch is included in the one and two day courses at the OCC. Saturday half-day PDC registrants are welcome to purchase a luncheon ticket for $20 at Registration. The CSP and EHMM courses at the Hilton also include lunch; no ticket required. Participants in the half day Sunday courses at the Hilton are on their own for lunch.

### Celebrate the 40th Anniversary of the OSH Act

**Sign the Anniversary Card!**

AIHce 2011 is celebrating the 40th Anniversary of the OSH Act, which created OSHA and NIOSH. Special recognition will occur during the Wednesday General Session, which includes a keynote presentation by OSHA Director, Dr. David Michaels. Show your support for the OSH Act by signing the specially created anniversary card in the Lobby. We are hoping to get thousands of signatures, so please stop by and sign the card!
Certification

**Documentation**

Access your AIHce continuing education records online—any time, from anywhere! Visit www.aiha.org, ‘Education & Conferences.’

Downloadable AIHA educational transcripts allow you to:

* Review educational credits (CM, COC, CEU points) awarded by AIHA/AIHce
* Update and add records to your transcript from other organizations
* Track training and professional development contact hours
* Print a complete history as often as you like

AIHA educational transcripts:

* Provide AIHce PDC certification information
* List AIHce attendance information at technical sessions
* Do not track presentation points for authors, speakers, or instructors unless self-entered
* Allow 45 days from course completion for information to appear on transcript

AIHA maintains attendance records for seven years. Registrants are responsible for retaining all documentation for future reference and/or certification audits. AIHA charges a $50 replacement fee for all documentation (prior to 2010) verifying attendance. For complete information, visit www.aiha.org/CMReplacement.

**American Board of Industrial Hygiene (ABIH)** has approved CM points for AIHce 2011 as follows:

* PDCs and symposium—see individual descriptions.

**Technical sessions, science symposium and tours**—maximum 4.5 CM points:

- Daily: 0.5 CM point per half day
- Wednesday eve: 0.5 CM point

Presenters, authors and session personnel.

* PDCs–0.33 CM point per hour of instruction
* Posters–1.0 CM point
* Technical sessions (CR, RT, PO, and PS):
  - Presenters: 1.0 CM point for presentation time > 20 minutes
  - Authors (non-presenters): 0.5 CM point
  - Arrangers receive 0.5 CM point in Category 7
  - Moderators do not receive CM points
  - Monitors do not receive CM Points

For proof of attendance ABIH accepts:

* PDCs–AIHA Educational Transcript
* General, technical sessions, science symposium, and tours–AIHA Educational Transcript
* Evidence of physical presence (i.e., approved expense report, hotel, meal, or parking receipts; ABIH CM Attendance Verification Form)
* Authors, PDC instructors, and technical session speakers—information listed on the AIHce website or in the AIHce Advance or Final Programs.

CM Approval Numbers for AIHce and individual PDCs will be listed on educational transcripts. Questions regarding CIH certification maintenance should be directed to ABIH at (517) 321-2638.

IH Technical or Professional Committee service is awarded Category 2 CM points up to a maximum of 5 CM pts per 5 year CM cycle. Participants receive 1 CM point/year as Chair and 0.5 CM point/year as a committee member.

The Registration Maintenance (RM) Committee of the Canadian Registration Board of Occupational Hygienists (CRBOH) has awarded the following points. Registrants claiming points must provide proof of attendance.

* 1.0 RM point per conference day
* 1.0 RM point for each full-day PDC
* 0.5 RM point per half-day PDC

AIHA is approved by the International Association for Continuing Education and Training (IACET) to award CEUs to participants who successfully complete courses. In obtaining this approval, AIHA has demonstrated that it complies with the American National Standards Institute ANSI/IACET 1-2007 standards, an internationally recognized set of standards for good practice.

As a result of its authorized provider membership status, AIHA is authorized to offer IACET CEUs for its programs that qualify under the ANSI/IACET 1-2007 standard. For point values, see individual PDC and symposium descriptions.

AIHA is authorized by the Board of Certified Safety Professionals (BCSP) to issue COC points in conjunction with the CSP certification. For point values, see individual PDC and symposium descriptions.

BCRSP
The Board of Canadian Registered Safety Professionals has awarded 2.0 certification maintenance points (CMP) for attending the full conference, May 16–19, 2011.
Customize and maximize your AIHce experience!

Use these handy technology tools to organize your conference schedule and connect with others. Put AIHce in the palm of your hand by downloading information to your mobile device.

**Educational Enhancements**

**Program Planner**
Stay organized throughout the week; use this tool to upload your conference schedule.

**e-abstract Book**
Select, download and prioritize abstract presentations by OEHS professionals and students.

**e-Handouts**
[www.aiha.org/eMats](http://www.aiha.org/eMats)
Select PDCs offer convenient, searchable resources that can easily be transferred, stored and retained. (Registered PDC participants only.)

**Collaborative Learning**
[www.aiha.org/eMats](http://www.aiha.org/eMats)
Start or join a discussion, share lessons learned, access references and ask follow-up questions — post-PDC. (Registered PDC participants only.)

**AIHce Virtual Tech Sessions**
[www.aiha.org/VirtualTechSessions](http://www.aiha.org/VirtualTechSessions)
Colleagues not attending AIHce? Connect them virtually to select Wednesday and Thursday sessions ... Live!

**AIHce on Demand**
Take AIHce home! Replay a specific technical session or the full conference.

**Your Social Connections**

**Cyber Cafe**
**Expo and Lobby E**
*Sponsored by Scientific Analytical Institute*
Locate colleagues and connect face-to-face or leave/retrieve messages. Stay in touch with home and office with complimentary web access.

**Laptop Lounge**
Keep family, friends, coworkers, clients and remote office access one click away on your laptop.

**Twitter, Facebook, LinkedIn**
Read what people are Tweeting, Friend other AIHce 2011 Fans or plan a Meetup.

**Twitter:**
[www.twitter.com/AIHA #aihce and #aihcesession](http://www.twitter.com/AIHA #aihce and #aihcesession)

**Facebook:**
[www.facebook.com](http://www.facebook.com)

**LinkedIn:**
[www.linkedin.com](http://www.linkedin.com)

**On and Beyond the Expo Floor**

**ChirpE**
Search for exhibitors online. Save favorites, build your own expo plan, and sync to your mobile device.

**Virtual Expo**
Plan your hall experience — search for exhibitors, products, and services.

**Expo Theater Presentations**
**Expo, Hall D**
Miss a presentation? View exhibitor sponsored product demos on the web and see what’s new in 2011.

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**After AIHce**
Check the AIHce website for the conference recap. View web clips of meeting highlights, news, interviews with prominent colleagues and a preview of AIHce 2012, June 16–21, in Indianapolis, IN.
1. Hilton Portland & Executive Towers
   921 SW 6th Avenue

2. The Benson Hotel
   309 SW Broadway

3. Courtyard by Marriott City Center
   550 SW Oak Street

4. Embassy Suites Hotel Portland
   319 SW Pine Street

5. Hotel Fifty Portland
   50 SW Morrison Street

6. Hotel Monaco
   506 SW Washington Street

7. Hotel Vintage Plaza
   422 SW Broadway Street

8. The Mark Spencer Hotel
   409 SW 11th Avenue

9. Marriott City Center Portland
   520 SW Broadway

10. The Nines Hotel
    525 SW Morrison Street

11. Paramount Hotel
    808 SW Taylor Street

12. Portland Marriott Downtown Waterfront
    1401 SW Natio Parkway

13. Westin Portland Hotel
    750 SW Alder Street

Lloyd District

14. Courtyard by Marriott Lloyd Center
    435 NE Wasco Street

15. Crowne Plaza Portland
    1441 NE Second Avenue

16. Doubletree Portland Hotel
    1000 NE Multnomah Street

17. La Quinta Inn
    431 NE Multnomah Street

18. Red Lion Portland Convention Center
    1021 NE Grand Avenue

Map is not drawn to scale and depicts approximate locations of hotels to the convention center.
All awards will be presented at the Opening General Session on Monday, May 16, unless otherwise noted.

**AIHA**

**Edward J. Baier Technical Achievement Award**

Established in 1984 in honor of Edward J. Baier, this award is presented by Bureau Veritas to the individual, company, academic institution, organization, or association that has made the most significant contribution to industrial hygiene in recent years. This year’s recipient is [Lauralynn Taylor McKernan, Sc.D., CIH](#). Dr. McKernan has significantly advanced the protection of workers through her contributions in validating new techniques to quantify lead exposures, investigating aerobiological exposures in aircraft and airports, providing national leadership on diacetyl and flavoring exposures as well as her participation on CDC emergency response efforts during the Anthrax Investigation, Hurricane Katrina, and the Deepwater Horizon Oil Spill.

**Donald E. Cummings Memorial Award**

The Donald E. Cummings Memorial Award was established in 1943 as a tribute to Donald E. Cummings, AIHA’s third president. It is given for outstanding contributions to the knowledge and practice of the profession of industrial hygiene. This year’s Cummings Award recipient is [Roy M. Buchan, DrPH, CIH](#). Dr. Buchan has devoted his entire professional life to the advancement of the knowledge and practice of industrial hygiene. He is one of those rare “agents of change” whose passion to improve conditions in the world has been truly effective. Dr. Buchan has been instrumental in creating healthier workplaces and workers around the world, not only by his personal efforts, but by the growing cadre of trained and educated practitioners of industrial hygiene that his determined efforts have created.

**Distinguished Service Award**

This award recognizes distinguished service in the advancement of industrial hygiene and unique technical contributions to the aims and goals of AIHA. [Richard D. Fulwiler, Sc.D., CIH, CSHM](#) will be awarded AIHA's distinguished service award for his many years of service to AIHA and to the industry. After a career which spanned nearly 30 years with Procter & Gamble, Dr. Fulwiler serves as president of Technology Leadership Associates, a consultancy dedicated to increasing the level of individual effectiveness in health, safety and environmental professionals. He has developed programs to emphasize the importance of industrial hygiene as a critical corporate component for a successful business plan. This represents the direction that our profession, and AIHA, has identified as the future of our profession. Dr. Fulwiler has also served as an officer of AIHA, the Academy and the Foundation.

**Kusnetz Award**

The Kusnetz Award was established in 1987 and is named for its donors, Florence Kusnetz and AIHA Past President Howard Kusnetz. This award was founded to honor a certified hygienist who has not reached his or her 40th birthday by May 1 of the year in which the award is presented, is employed in the private sector, and has worked to provide the highest standards of health and safety protection for the employees for which he or she is responsible by exhibiting high ethical standards and technical abilities. This year’s Kusnetz Award recipient is [Sampa Das Ostrem, CIH](#). With over 14 years of experience in health and safety, she has been the principal of her own industrial hygiene consulting company since 2005. Throughout her career, Ms. Ostrem has put the ethics of the health and safety profession above all else. She has proven that this high ethical standard can protect the worker, the profession and run a successful business in the process.

**Alice Hamilton Award**

The Alice Hamilton Award was established in 1993 by the AIHA Board of Directors. This award is presented to an outstanding woman who has made a definite, lasting achievement in the field of occupational hygiene through public and community service, social reform, technological innovation or advancements in the scientific approach to the recognition, evaluation, and control of workplace hazards. This year’s award winner is [Chris L. Laszcz-Davis, MS, CIH, REA](#). As founder and principal of The Environmental Quality Organization, LLC, Ms. Davis has more than thirty years of executive management, professional, technical and consulting experience in environmental affairs, occupational health and safety, operational integrity, risk management and product stewardship. Her strengths include leadership, problem solving, teamwork and the ability to bring diverse parties and perspectives to resolution.

**Social Responsibility Award**

Established in 2009 and cosponsored and supported by Bureau Veritas, the Social Responsibility Award is presented to an individual, entity, group or organization who works inside organizations to develop and promote practical solutions to social responsibility issues related to industrial hygiene or environmental health and safety issues. This year’s winner is the [Maquiladora Health and Safety Support Network (MHSSN)](#) located in Berkeley, California. Since its founding in 1993, over 400 occupational health and safety professionals in the MHSSN have provided pro bono trainings, technical assistance and support for workplace health and safety to worker organizations in Mexico, Central America and the Caribbean, Indonesia and China. The goal of the network’s efforts has always been to build the OHS capacity of local organizations, to reduce injuries and illnesses among workers, to reduce the pain and suffering to injured and ill workers, and to reduce the burden to society (especially in poor countries) generated by sick and injured workers and survivor families. The Network Coordinator, Garrett D. Brown, MPH, CIH, will accept the award on behalf of MHSSN.
William P. Yant Award

The William P. Yant Award was established in 1964 to commemorate the leadership and breadth of contributions to industrial hygiene of William P. Yant, ScD, first president of AIHA. Sponsored by the Mine Safety Appliances Company, the award is presented for outstanding contributions in industrial hygiene or allied fields to an individual residing outside the United States. This year’s Yant Award winner is Trevor Ogden, BSc, PhD of the United Kingdom. Dr. Ogden is the chief editor of the international journal *Annals of Occupational Hygiene* and as such has played a very important role in shaping the science and practice of occupational hygiene worldwide. Since taking on the role of chief editor in 1997, the number of submissions and the impact factor of the journal have doubled. Before taking on the role of chief editor, Dr. Ogden had a distinguished career in occupational hygiene research, first at the Institute of Occupational Medicine in Edinburgh and then later at the UK National Health and Safety Laboratory (the equivalent of NIOSH).

President’s Award

The President’s Award is given to an individual, task force, special interest group, or local section for outstanding contribution to efforts to achieve the mission of the AIHA during the presidency year. Kept secret until conference, the award winner will be announced and honored at the AIHA President’s Reception on Wednesday, May 16, between 6:30 and 8:00 p.m.

2011 AIHA Fellows

The 2011 Fellow Award winners will be honored during the newly formed AIHA Fellows SIG meeting on Wednesday, May 16, and again during the President’s Reception. Members chosen to be Fellows were nominated by colleagues in the profession for their significant contributions to the practice of industrial hygiene or related disciplines. The Fellow classification is limited to no more than 5 percent of the AIHA membership.

ACGIH® Awards

The John J. Bloomfield Award

This award is presented to a young industrial hygienist who pursues the problem of occupational health hazards primarily by doing fieldwork, and who demonstrates significant contribution to the profession. This year’s recipient is Lilia Chen, MS, CIH. Ms. Chen works for the Hazard Evaluations and Technical Assistance Branch of NIOSH. She has been the primary project officer on 60 health hazard evaluations, and assisted on numerous others. She has presented her findings at national and international conferences and the results of her evaluations have resulted in publications and articles. Ms. Chen led a nationwide NORA-funded field study investigating exposures to a high level disinfectant used in healthcare facilities among other projects. She received her BS in Biology and Environmental Studies from Tufts University and her MS in Public Health from the University of Illinois at Chicago. She has been a member of ACGIH® since 2003. Ms. Chen continues to further her knowledge and expertise through continuing education and challenging work assignments. The award will be presented at the ACGIH® Membership Reception and Annual Meeting of the Membership on Sunday, May 15 and at the AIHce Opening Session.

Meritorious Achievement Award

This award is given to members of ACGIH® who have made an outstanding, long-term contribution to the progress of occupational and environmental health. The recipient of this year’s award is Jimmy L. Perkins, PhD, CIH. Dr. Perkins began his academic career at the University of Alabama at Birmingham where he spent 15 years as the IH Program Director and Department Chair. He later joined the UT SPH San Antonio Regional Campus as Regional Dean. Dr. Perkins has served the profession as a member of the NIOSH Safety and Occupational Health Study Section, the ASTM F23 on protective clothing, as Chair of ARIH, and in various positions in AIHA local sections and Committees. He has been a member of ACGIH® since 1985 and served on its Board of Directors from 2007-2010, serving as Chair in 2009. Dr. Perkins has authored numerous publications including the *Modern Industrial Hygiene* series in ACGIH®’s *Signature Publications*. The award will be presented at the ACGIH® Membership Reception and Annual Meeting of the Membership on Sunday, May 15 and at the AIHce Opening Session.

William Steiger Memorial Award

This award honors individuals from the social/political sphere whose efforts have contributed to advancements in occupational safety and health. This year’s recipient is Roger Alesbury, MS, FFOH, CFIOH. Mr. Alesbury is a founding director of The Occupational Hygiene Training Association (OHTA) and chairs its Leadership Group. OHTA is a non-profit voluntary organization providing global training and qualifications programs to protect worker health. An engineer by training, Mr. Alesbury spent most of his career working internationally as an Industrial Hygienist in the oil and chemical industries. For a decade prior to retirement, he was Director of Industrial Hygiene for BP. He is a Fellow of the Faculty of Occupational Hygiene, Chartered Fellow of the Institution of Occupational Safety and Health, a Past President of the Institute of Occupational Hygienists and Past President of BOHS. He has published many articles and reviews on his main areas of interest relating to control of exposures from the work environment and building occupational hygiene capability in developing countries. This award will be presented at the AIHce Opening Session.
Awards

Herbert E. Stokinger Award
This award is given each year to an individual who has made a significant contribution to the broad field of industrial and environmental toxicology. This year’s recipient is Len Levy OBE, PhD, FFOM, FBTS. Dr. Levy is currently an Emeritus Professor of Environmental Health in the Institute of Environment and Health at the University of Cranfield, United Kingdom. Prior to this position, he was Head of Toxicology and Risk Assessment at the UK Medical Research Council’s Institute for Environment and Health at the University of Leicester. Dr. Levy holds a doctorate in experimental pathology from the Institute of Cancer Research in London. He has held academic positions at the University of Aston and at the University of Birmingham’s Institute of Occupational Health. Dr. Levy has published more than 250 papers on occupational carcinogenesis, occupational and environmental toxicology, risk assessment and risk management and the regulatory aspects of both environmental and occupational air standards. He received the OBE for Services to Health and Safety in 2000. He currently serves as Chair of the influential UK Interdepartmental Group on Health Risks from Chemicals (IGHRC) on behalf of the UK Government. The award will be announced at the AIHce Opening Session and presented at the Stokinger Lecture on Thursday, May 19.

AIHA Volunteer Groups

David L. Swift Memorial Award
This award honors the memory of Dr. David L. Swift, professor at The Johns Hopkins University, for his outstanding contributions to aerosol and industrial hygiene research. Aerosol research papers published each the year in the Journal of Occupational and Environmental Hygiene are reviewed by the Aerosol Technology Committee.

Donna Doganiero Award
The AIHA Safety Committee presents a Best Crossover Session Award for an AIHce presentation of exceptional quality and one that has a particular relevance to the field of Occupational Safety. The Safety Committee makes this award in the name of Donna Doganiero, a truly outstanding individual, to recognize her achievements and vision in continuing to move the field of industrial safety and hygiene forward.

Environmental Issues Committee Rachel Carson Award
AIHA’s Environmental Issues Committee bestows this highest honor to an EHS professional or group who has attained outstanding success in his/her business, profession or life’s work.

H. Kenneth Dillon Memorial Award
This award is presented by the Biosafety and Environmental Microbiology Committee to honor the memory of Dr. Ken Dillon, a former AIHA fellow and the principal instructor for several years of the popular PDC “Prevention, Determination, and Remediation of Biological Contamination in Indoor Environments.” The award, a plaque and honorarium, is presented to the best student poster at AIHce.

Indoor Environmental Quality Committee Best IEQ Paper Award
Since 1997, the Indoor Environmental Quality (IEQ) Committee has evaluated peer-reviewed journal articles that promote the practice of IEQ. The authors of the winning paper are honored at the committee’s annual meeting. To be nominated, the paper must: (a) be peer-reviewed and published during the previous calendar year in the Journal of Occupational and Environmental Hygiene; (b) provide practical information for industrial hygienists and expand the knowledge base of indoor environmental quality professionals; (c) address a critical issue in IEQ; and (d) present the topic in an engaging and well-written manner.

John A. Leonowich Award for Educational Excellence in Nonionizing Radiation
The John A. Leonowich Award honors educational excellence in nonionizing radiation by students actively pursuing NIR initiatives through research or education.

John M. White Award
Established by the Respiratory Protection Committee, this award encourages scientific and application-oriented research in respiratory protection. It recognizes work that enhances the knowledge base in an area of understanding or provides new insight that will lead to improved employee protection.

Larry and Ruth Birkner Award
The Birkner Award is given by the Management Committee in honor of AIHA member Larry Birkner, past Chair of the Management Committee, and his wife, Ruth McIntyre Birkner. The award recognizes achievement in one of several management areas in industrial hygiene practice: a significant achievement in one or more aspects of industrial hygiene management, significant teaching achievements in industrial hygiene management, or other achievements deemed worthy. The award is presented at the Annual Meeting of the Management Committee.

Margaret Samways Memorial Student Poster Award
This award honors the memory of Margaret Samways, past Chair and longtime member of the Communication and Training Methods Committee. Margaret, with her vast knowledge and practical experience as a trainer, worked tirelessly to provide industrial hygienists with valuable tools to deliver effective training that facilitates learning and ultimately improves worker health.

Noise Committee Outstanding Lecture
This award was established in 1995 to encourage excellence in education, public speaking, and presentation on noise-related topics at AIHce. The award is determined by a vote of the Committee and is based on registrant evaluations.

Occupational and Environmental Medicine Committee Award
The Committee plans to recognize an individual for excellence in the field of occupational and environmental medicine. Judges will consider presentations, professional development courses, poster sessions and peer-reviewed published manuscripts from both the medical and industrial hygiene disciplines that contribute to the advancement of occupational and environmental medicine.
Real-Time Detection Systems Committee Outstanding Presentation Awards
All Real-Time Detection Systems Committee poster presentations are eligible for two awards: Best Poster Session and Best Student Poster. These awards acknowledge excellence in basic or applied research in the gas and vapor detection field. The winning posters are determined by evaluations of the Real-Time Detection Systems Committee and registrants at the presentation.

Rochelle Crew Memorial Award
The Construction Committee presents this award in memory of Ms. Crew, a former member of the committee and longtime instructor of construction safety PDCs. The award, a plaque and donation of training materials, is given to the best construction-related paper, presentation, or PDC presentation at the previous year’s AIHce.

Sampling and Laboratory Analysis Committee Award
This award recognizes outstanding contributions to the field of industrial hygiene sampling analysis and is given for Best Presentation and Best Poster.

Tichauer Award
The Ergonomics Committee established the Tichauer Award in 1996 for Best Ergonomics Podium and Best Ergonomics Poster by a young researcher. The award was established to encourage ergonomics-related conference participation and to recognize excellence in research conducted by students and young researchers.

Upton Sinclair Memorial Lecture
The Upton Sinclair Memorial Lecture on outstanding occupational health, safety, and environmental investigative journalism is awarded by the Social Concerns Committee. The 2011 Upton Sinclair Memorial Lecture will be delivered by Jim Morris of the Center for Public Integrity at 10:30 a.m. on Tuesday.

2010 AIHA Bestseller
This award is presented to the publication that sold the most copies during the year. The 2010 Bestseller is presented to Anthony Martinez, CIH, CSP, author of the Industrial Hygiene Desk Reference Card. In 2010, AIHA sold 510 copies of this publication. This award will be presented Monday, May 16, at the Volunteer Recognition Reception.

2010 Critic’s Choice Award
This award honors a publication completed in 2010 and evaluated by members of the Publications Committee. The committee selected this publication based on its impact on the IH profession, originality, and the quality of writing. The recipient of the 2010 Critic’s Choice is Bernard D. Silverstein, CIH, editor of the AIHA® Value Strategy Manual. The award will be presented at the Volunteer Recognition Reception.

The Golden Seed Award
The Students and Early Career Professionals Committee presents this award to an individual who has demonstrated a commitment to promoting industrial hygiene and/or provided guidance and mentoring to students or early career professionals. The award will be presented at the Volunteer Recognition Reception.

AIHce Best Poster Award
This Award is selected based on two criteria: (1) technical content—organization of the material, current importance of the topic, sophistication of scientific or technological aspects of the subject, and the importance of the conclusions for today’s workers; and (2) visual communication—clarity, color, space, balance, text, graphics and effectiveness.
Portland offers a unique mix of activities — both indoor and out — and has something for everyone. With short blocks, elegant gardens, iron bridges, outdoor art, and intriguing architecture, you’ll enjoy getting to know this diverse and slightly off-beat city with a personality all its own.

Fees include coach transportation, professional escort, and admissions where applicable. Purchase tickets at registration.* Board bus fifteen minutes prior to scheduled departure from the M.L. King Jr. Lobby and the Hilton, 6th Street entrance.

Monday

ST-01 Portland Highlights
12:30 p.m.–4:30 p.m., $50 per person
Get to know Portland on this "windshield" tour of the city’s highlights — Pioneer Square, Saturday Market, the Steel Bridge, Waterfront Park, the Pearl District and Voodoo Doughnuts to name a few...

Stop at Pittock Mansion, decorated with a mix of Turkish, English designs using Northwest materials and featuring the technology of the time — a central vacuum system, intercom, and indirect lighting.

From Pittock Mansion, it’s a short ride to the International Rose Test Garden in Washington Park. The Garden features 600 varieties of roses which should just be budding in May!

ST-02 Microbrew Hop
4:00 p.m.–8:00 p.m., $65 per person
Oregon produces all of the ingredients it takes to make great beer — fragrant hops from the Willamette valley, grains from the eastern plains, crystal clear waters from the Cascades and people with a pioneering spirit to complete the recipe. Discover the reason Portland’s popular microbrews receive national recognition.

Visit three of Portland’s popular brewpubs, each featuring its own distinctive brews. Lift a pint with fellow conference-goers and enjoy pub fare (at one brewery) as your guide shares a little of the history of Oregon’s renowned microbrew industry.

Tuesday

ST-03 City Art Trek
9:00 a.m.–Noon, $22 per person
You’ve seen Portland by bus now see it up close and personal! Join your guide as he shares anecdotes that bring Portland’s history to life.

Uncover the hidden treasures of Pioneer Courthouse Square.

See Portlandia, the second largest hammered copper statue in the country. Stroll through historic South Park in the Cultural Arts District. Meander along Waterfront Park where the Willamette River, outdoor works of art and Portland’s many bridges converge.

Total walking distance = 1 mile. Sturdy shoes, comfortable clothes, hat, sunglasses, sun protection recommended. Snack stop along the way.

ST-04 “DeVine” Wines
12:30 p.m.–5:30 p.m., $65 per person
Visit one of the most scenic and prolific wine growing regions in the Pacific Northwest — Yamhill County. Travel past rolling hillsides, picturesque vineyards, and tidy orchards to visit two of the area’s finest vineyards, Duck Pond Cellars and Erath Vineyards.

Yamhill County’s vintners produce wines that consistently receive the highest honors in U.S. and international competitions.

Tour one winery. Sample tastings at both wineries, boxed lunch included.

*Advance purchased tickets are nonrefundable.

Individuals with special dietary needs participating in ST-04 and ST-06 should see staff at the tours desk by noon, the day prior to the scheduled tour departure.
On All Tours

... to insure admittance to the tour site, carry valid government issued photo identification, i.e., driver’s license, passport, or military ID. Personal electronics (cameras, iPods, cell phones with photographic capability and other like items) are prohibited. Briefcases, backpacks and totes are discouraged. Appropriate attire, including slacks (no shorts or skirts) and flat, closed sturdy walking shoes are a must!

Additional PPE and restrictions detailed below, if applicable. Board bus fifteen minutes prior to scheduled departure from the M. L. King Jr. Lobby entrance. Tickets are nonrefundable.

Monday, May 16

SOLD OUT
TT-01 Stimson Lumber Company
10:00 a.m.–1:00 p.m.

SOLD OUT
TT-02 Kaiser Permanente Medical Center
1:00 p.m.–5:00 p.m.

Individual must provide over-the-ankle boots or shoes.

Tuesday, May 17

SOLD OUT
TT-03 East Side Plating, Inc.
9:30 a.m.–1:00 p.m.

SOLD OUT
TT-04 Intel Corporation
1:30 p.m.–5:30 p.m.

Wednesday, May 18

SOLD OUT
TT-05 SolarWorld Industries of America
9:30 a.m.–1:30 p.m.

CM Points . . .
Tours are included in the overall 1 CM point per day.

Need Assistance?

Staff holding “Ask Me” signs are positioned throughout the OCC, Saturday through Tuesday, to help registrants with directions and information. Don’t be afraid to “Ask!”
Future Leaders and Young Members Reception  
(by invitation)  
Sponsored by 3M  
Sunday, May 15, 8:00 p.m.–11:00 p.m.  
Spirit of 77  
500 NE Martin Luther King Jr., Blvd.  
(across from the Oregon Convention Center)  
MAX Light Rail Stop: Rose Quarter or Convention Center  
Have you been a part of the Future Leaders Institute? Are you a student member attending AIHce? If so, please join us for the Future Leaders and Young Member Reception. Socialize with peers and meet new people! Admission by ticket.

Students and Early Career Professionals Track  
Sponsored by the Students and Early Career Professionals Committee, these sessions focus on topics relevant to those new to the profession. Learn practical tips for certification and transitioning from college to work.

RT 220 Perspectives on Preparation for the CIH Exam—Version 5.0  
Tuesday, May 17, 10:30 a.m.–1:00 p.m.  
OCC, D139  
RT 237 Making Changes: Embracing an Uncertain Future and Thriving  
Wednesday, May 18, 1:00 p.m.–3:30 p.m.  
OCC, F152

Student Lunch Discussions  
Monday, May 16  
12:30 p.m.–1:30 p.m.  
OCC, Expo, Hall D  
Designed specifically for students and early career professionals, AIHA members lead informal discussions on a variety of topics including career goals, certification, volunteering, and more! Purchase lunch and pick a topic. Seating is available first-come, first served.

Mentoring Happy Hour  
Sponsored by the Students and Early Career Professionals (SECP) Committee  
Monday, May 16, 5:00 p.m.–7:00 p.m.  
Kells Irish Restaurant & Pub  
112 SW 2nd Avenue  
MAX Light Rail Stop: Skidmore Fountain  
Are you interested in finding or being a mentor? Attendance is open to anyone who would like to come and learn about or join the mentoring program.

Volunteer Collaboration Café  
Sunday, May 15–Wednesday, May 18, 7:30 a.m.–5:00 p.m.  
OCC, Lobby C  
Need a place to relax for a few minutes? Visit the Collaboration Café—a multi-purpose area where you can unwind, network and attend complimentary special events.

CareerAdvantage Development Fair  
Monday, May 16–Wednesday, May 18  
OCC, Hall A  
Sponsored by the AIHA Career and Employment Services Committee, this year’s Building Careers for Life features sessions designed to help those in the field advance their current careers and find and maintain positions in the industry. The CareerAdvantage Development Fair also provides an opportunity for employers and OEHS professionals to mingle and make important contacts.

AIHF Fun Run/Walk  
Sponsored by Scott Safety  
Tuesday, May 17, 6:30 a.m.  
Ankeny Pavilion  
MAX Light Rail Stop: Skidmore Fountain  
$40 per person/Member students no charge  
Lace up your sneakers and support the work of the American Industrial Hygiene Foundation. This event is open to all from serious runners to recreational walkers. Member students are admitted at no charge (student badge required). All participants must check-in at the Social Tours / Run/Walk + Pin Counter in the Convention Center from Sunday, Noon until 5:30 p.m., on Monday. New registrants are also welcome. Walk-ins at the race site are not permitted.

21st Annual Student Poster Session  
Wednesday, May 18  
10:00 a.m.–Noon  
OCC, Expo, Hall B  
Students discuss their research; two posters will be selected “Best of Session.”

Student Local Sections Council Business Meeting  
Tuesday, May 17  
2:00 p.m.–4:00 p.m.  
OCC, E142  
Meet other student local section officers and share best practices with one another. Students interested in forming a student section at their school are encouraged to attend.

Students and Early Career Professionals Committee Meeting  
Thursday, May 19  
8:00 a.m.–10:00 a.m.  
OCC, E141  
Interact with members of the SECP Committee. Discuss current and new projects focused on developing outreach materials and providing students and early career industrial hygienists with mentoring. New volunteers, including students, are encouraged to attend.

AIHA Volunteer Group Meetings  
Monday, May 16–Wednesday, May 18  
These are not closed door meetings! AIHA has more than 45 volunteer groups that focus on a variety of technical topics and several that address student needs. Unless otherwise noted, volunteer group meetings are open to all.
Résumé Critiquing
Monday, May 16
8:00 a.m.–Noon and 2:30 p.m.–4:00 p.m.
Tuesday, May 17
8:00 a.m.–9:00 a.m. and 10:30 a.m.–Noon
Wednesday, May 18
9:00 a.m.–Noon and 1:00 p.m.–3:00 p.m.
Bring your résumé to the Development Fair to sign up for your résumé critiquing session with an experienced hiring director. You will get helpful feedback directly related to style, length, focus, use of accomplishments and keywords, and more.

Seminar: You’re Hired — The Do’s and Don’ts of Job Interviews – Live Interview and Critique
Monday, May 16, 1:30 p.m.–2:30 p.m.
Mary Ellen Brennan, SPHR
William Nichols
Richard Prodans, CIH, CSP
Members of the Career and Employment Services Committee (CES) and the AIHA Human Resources Director will stage and manage several mock job interviews to give attendees the Do’s and Don’ts of interviewing in today’s professional workplace. The seminar will give attendees an interactive experience where they can observe and discuss interviewing styles and communication obstacles. Attendees will gain practical tools and relevant knowledge to use when looking for a new opportunity.

Seminar: Everyone Is a Consultant
Tuesday, May 17, 9:30 a.m.–10:30 a.m.
Thomas Blank, CIH, CSP
Kevin Roegner, MPH, CIH
Gain insight on how to determine whether a consulting practice is for you, how to establish a consulting business, practical matters for beginning a consulting practice, and overcoming various obstacles.

Seminar: Bridging the Gap to Retirement
Tuesday, May 17, 1:30 p.m.–2:30 p.m.
John Henshaw, CIH
Meet John Henshaw, former Assistant Secretary of Labor OSHA, as he discusses “Bridging the Gap to Retirement.” In his distinguished career, Mr. Henshaw has worked for a large multinational chemical and pharmaceutical corporation, provided direction to a government agency in transition, and now has established a consulting business. In this seminar, he will focus on building your career, choosing the right time to retire, planning for the future, and making the most of your skills. Mr. Henshaw will talk on preparing your career at age 60 — discussing what must be considered when making career decisions or deciding what to do next — you may want to pursue a new job, pursue a new interest or a different career, work part-time, teach your skills to others, or just enjoy your retirement.

Speed Networking
Tuesday, May 17, 3:00 p.m.–4:00 p.m.
Sponsored by the Career and Employment Services Committee
Bring plenty of business cards and be ready to meet with colleagues from all levels and industries — you will make more contacts in a shorter time.

Employers!
It’s not too late to post your open positions using the Development Fair package. Stop by to quickly post your jobs online so candidates can view them immediately. You can also search through online résumés and select from over one thousand qualified OEHS professionals. Visit the staff at the Development Fair today to find out more.
See What’s New—
Discover the Volunteer Collaboration Café
Convention Center, Lobby C

Explore our interactive volunteer display and learn how you can benefit from the dynamic AIHA’ volunteer experience.

Sunday, May 15
7:30 a.m.–5:00 p.m.

Student Meet and Greet
3:00 p.m.–3:30 p.m.
Before the start of AIHce, connect with other AIHA student members.

Monday, May 16
Explore, Interact, and Learn—Investigate the Volunteer Collaboration Café
7:30 a.m.–5:00 p.m.
Daily special events will expand your volunteering horizon and provide opportunities to network with peers and staff.

General Session replayed throughout the day!

10:30 a.m.–11:00 a.m.
Student Exchange
A great opportunity to meet new friends.

11:00 a.m.–11:30 a.m.
Meet Your Sponsors—Student Local Sections and Local Sections
Belong to a student local section? Connect with your sponsoring local section at this event.

11:30 a.m.–Noon
Bring AIHA to Your Campus
Learn how easy it is to create a student local section on your campus.

12:30 p.m.–1:00 p.m.
Networked
Learn how to use and benefit from a social media presence online.

2:00 p.m.–3:00 p.m.
Remembering the Triangle Shirtwaist Factory Fire: 100 Years Later
View the “Triangle Fire” episode from the PBS series, “American Experience.” The Triangle Fire was the deadliest workplace accident in New York City’s history. A match dropped on the 8th floor of the factory sparked a fire that killed over 100 innocent people trapped inside. The private industry of the American factory would never be the same. Hosted by AIHA’s Social Concerns Committee.

3:30 p.m.–4:00 p.m.
Turning Your Technical Expertise into Publishable Materials
Learn how to satisfy that burning desire to see your name in print — write for AIHA publications.

4:30 p.m.
Raffle
Sign up for the daily raffle. The drawing takes place at 4:30 p.m.

Tuesday, May 17
Do You ❤ Volunteering?
7:30 a.m.–5:00 p.m.
Come see for yourself why so many of your peers volunteer. By joining them, you can make the most of your AIHA membership. Check out these special events.

General Session replayed throughout the day!

9:30 a.m.–10:30 a.m.
Remembering the Triangle Shirtwaist Factory Fire: 100 Years Later
View the “Triangle Fire” episode from the PBS series, “American Experience.” The Triangle Fire was the deadliest workplace accident in New York City’s history. A match dropped on the 8th floor of the factory sparked a fire that killed over 100 innocent people trapped inside. The private industry of the American factory would never be the same.

10:30 a.m.–11:00 a.m.
Ask the PCC Chair
Meet Maritza Adams, CSP, Chair, PCC. Find out about the AIHce Technical Program submission and peer review requirements.

11:00 a.m.–11:30 a.m.
Giving Back—Mentoring Program
Are you interested in being or finding a mentor? If so, stop by and sign up.

11:30 a.m.–Noon
Education Is Key to Maintaining an Edge
Discuss educational opportunities and professional development with AIHA Continuing Education Coordinator Jessica Pagel. Find out how you and your organization can benefit from educational options like on-site group training and road courses offered in the U.S. and abroad.

12:30 p.m.–1:00 p.m.
Explore Your Virtual Learning Options
AIHA Distance Learning Program Manager, Cinthia Minan, offers practical advice on how to maintain your certifications, train large groups or even present a course via any one of AIHA’s many virtual, web, and self-study formats.

1:00 p.m.–1:30 p.m.
AIHA’s Continuing Education Committee (CEC)—Delivering Quality Educational Options
Ever wonder about the role of the CEC or how you can get involved? Join members of the CEC at the café to discuss how they shape OEHS education. Learn about their goal to deliver practical skills and tools that enhance technical competence, as well as the overall profession, through traditional and non-traditional education formats.

2:00 p.m.–2:30 p.m.
Meet Your Neighbors: Local Section Interactions
Network and collaborate with members from other AIHA local sections.

3:00 p.m.–3:30 p.m.
Networked
Learn how to use and benefit from a social media presence online.

4:30 p.m.
Raffle
Visit the café and sign up for the daily raffle. The drawing takes place at 4:30 p.m.
Wednesday, May 18
Be Seen, Be Heard—Before It’s Too Late
7:30 a.m.–5:00 p.m.
Take advantage of this last opportunity to network with peers and share
your ideas!

General Session replayed throughout the day!

10:30 a.m.–11:30 a.m.
Remembering the Triangle Shirtwaist Factory Fire: 100 Years Later
View the “Triangle Fire” episode from the PBS series, “American Experience.” The Triangle Fire was the deadliest workplace accident in New York City’s history. A match dropped on the 8th floor of the factory sparked a fire that killed over 100 innocent people trapped inside. The private industry of the American factory would never be the same.

1:00 p.m.–1:30 p.m.
Student Exchange
Meet other student members and exchange contact information, before it’s too late.

2:00 p.m.–2:30 p.m.
Learning about AIHF Scholarships
Learn what it takes to apply for an American Industrial Hygiene Foundation Scholarship.

3:00 p.m.–3:30 p.m.
Giving Back—Mentoring Program
Are you interested in being or finding a mentor? If so, stop by and sign up.

4:30 p.m.
Raffle
Visit the café and sign up for the daily raffle. The drawing takes place at 4:30 p.m.

*Daily events are subject to change

INAUGURAL EVENT!
For the first time, AIHA is bringing quality programming to the Asia Pacific region. Programme highlights include:

• Top quality speakers from global companies like Reliance, ITT, ExxonMobil, 3M, GE, and many more.
• Three professional development courses on Noise, Exposure Assessment, and Value Strategy
• Two tracks: a Management Track on Stewardship and Sustainability; and a Technical Track
• An Exhibition, lunches, receptions, and many opportunities for networking

You won’t want to miss this exciting new event!

To view the full program and to register, visit www.aihaap.org.
AIHA Board and Volunteer Group Activities

AIHA®

Academic Accreditation Committee Meeting
Sunday, May 15, 6:00 p.m.–10:00 p.m., Hilton, Executive Suite

Academic SIG Meeting
Wednesday, May 18, 1:00 p.m.–3:00 p.m., OCC, E141

Academy Conference Team Meeting
Monday, May 16, 12:30 p.m.–1:30 p.m., OCC, VIP Suite D

Academy of Industrial Hygiene Meeting
Saturday, May 14, 9:00 a.m.–5:00 p.m., Hilton, Studio Suite

Aerosol Technology Committee Meeting
Tuesday, May 17, 1:00 p.m.–3:00 p.m., OCC, E143

Accredited Laboratory Forum
Sunday, May 15, 5:30 p.m.–7:30 p.m., Portland, 252

AIHce Exhibitor Advisory Group Meeting
Tuesday, May 17, 3:00 p.m.–4:00 p.m., OCC, VIP Suite D

Annual Business Meeting
Thursday, May 19, 8:30 a.m.–10:30 a.m., OCC, C126

Analytical Accreditation Board Meeting
Saturday, May 14, 9:00 a.m.–5:00 p.m., Hilton, Alexanders, 23rd Floor

ANSI/AIHA ASC Officers Meeting
Wednesday, May 18, 10:00 a.m.–11:00 a.m., OCC, VIP Suite D

ANSI/AIHA Z9.12 Subcommittee Meeting
Tuesday, May 17, 8:00 a.m.–11:00 a.m., OCC, D131

ANSI/AIHA Z10 Subcommittee Meeting
Tuesday, May 18, 1:00 p.m.–3:00 p.m., OCC, E143

ANSI/AIHA Z9.12 Subcommittee Meeting
Monday, May 16, 7:30 a.m.–9:30 a.m., OCC, E147

ANSI/AIHA Z9.12 Subcommittee Meeting
Monday, May 16, 10:00 a.m.–Noon, Hilton, Executive Tower

ANSI/AIHA Z9.12 Subcommittee Meeting
Tuesday, May 17, Noon–1:00 p.m., OCC, E148

BEEIL Committee Meeting
Monday, May 16, 3:30 p.m.–5:30 p.m., OCC, E143

Biological Monitoring Committee Meeting
Monday, May 16, 1:00 p.m.–3:00 p.m., OCC, E143

Biohazard and Environmental Microbiology Committee Meeting
Monday, May 16, 9:00 a.m.–10:00 a.m., OCC, E146

Blue Council Meeting
Tuesday, May 17, Noon–1:00 p.m., OCC, E144

Board of Directors Meeting
Sunday, May 15, 8:00 a.m.–4:30 p.m., The Nines, Gallery

Board of Directors Meeting
Thursday, May 19, 11:30 a.m.–4:30 p.m., The Nines, Design

Career and Employment Services Committee Meeting
Wednesday, May 18, 9:00 a.m.–11:00 a.m., OCC, E144

Clandestine Laboratory Working Group Meeting
Tuesday, May 17, 7:30 p.m.–9:30 p.m., OCC, E141

Communication and Training Methods Committee Meeting
Tuesday, May 17, 1:00 p.m.–3:00 p.m., OCC, E141

Computer Applications Committee Meeting
Tuesday, May 17, 3:30 p.m.–5:30 p.m., OCC, E143

Confined Spaces Committee Meeting
Monday, May 16, 9:30 a.m.–11:30 a.m., OCC, E143

Construction Committee Meeting
Wednesday, May 18, 9:30 a.m.–12:30 p.m., OCC, E146

Consultants SIG Business Meeting
Wednesday, May 18, 1:00 p.m.–3:00 p.m., OCC, E144

Continuing Education Committee Meeting
Monday, May 16, 2:00 p.m.–6:00 p.m., Hilton, Forum Suite

Control Banding Working Group Meeting
Wednesday, May 18, 3:30 p.m.–5:30 p.m., OCC, E144

Dermal Project Team Meeting
Tuesday, May 17, 9:00 a.m.–10:00 a.m., OCC, E148

Engineering Committee Meeting
Tuesday, May 17, 9:30 a.m.–11:30 a.m., OCC, E143

Engineering Industry SIG Meeting
Tuesday, May 17, 1:00 p.m.–3:00 p.m., OCC, E147

Environmental Issues Committee Meeting
Tuesday, May 17, 9:30 a.m.–11:30 a.m., OCC, E142

Environmental Issues SIG Meeting
Wednesday, May 18, 3:30 p.m.–5:30 p.m., OCC, E147

Ergonomics Committee Meeting
Wednesday, May 18, 3:30 p.m.–5:30 p.m., OCC, E146

Exposure Assessment Committee Roundtable Meeting
Monday, May 16, 8:30 a.m.–9:30 a.m., OCC, E145

Exposure Assessment Strategies Committee Meeting
Tuesday, May 17, 9:30 a.m.–11:30 a.m., OCC, E145

Fellows SIG Meeting
Wednesday, May 18, 4:00 p.m.–6:00 p.m., Hilton, Grand Ballroom II

Finance Committee Meeting
Monday, May 16, 2:00 p.m.–4:30 p.m., OCC, VIP Suite D

Future Leaders and Young Members Reception (by invitation)
Sunday, May 15, 8:00 p.m.–11:00 p.m., Spirit of 77, 500 NE MLK Jr., Blvd.

Government Affairs Update
Tuesday, May 17, 8:30 a.m.–9:30 a.m., OCC, E145

Green Council Meeting
Tuesday, May 17, Noon–1:00 p.m., OCC, E145

Healthcare Working Group Meeting
Wednesday, May 18, 9:30 a.m.–11:30 a.m., OCC, E141

Incident Preparedness and Response Working Group Meeting
Wednesday, May 18, 1:00 p.m.–3:00 p.m., OCC, E148

Indigo Council Meeting
Tuesday, May 17, Noon–1:00 p.m., OCC, E148

Indoor Environmental Quality Committee Meeting
Wednesday, May 18, 9:30 a.m.–11:30 a.m., OCC, E145

Indoor Environmental Quality SIG Meeting
Wednesday, May 18, 9:30 a.m.–11:30 a.m., OCC, E145

International Affairs Committee Meeting
Monday, May 16, 2:00 p.m.–6:00 p.m., Hilton, Galleria South

International Reception (by invitation)
Monday, May 16, 6:30 p.m.–8:00 p.m., Hilton, Grand Ballroom I

International Training/Qualifications in OH Meeting
Monday, May 16, 3:00 p.m.–5:00 p.m., OCC, E126

Ionizing Radiation Committee Meeting
Monday, May 16, 1:00 p.m.–3:00 p.m., OCC, E148

Joint Industrial Hygiene Ethics Education Committee Meeting
Sunday, May 15, 4:00 p.m.–6:00 p.m., Hilton, Boardroom East

Laboratory Health and Safety Committee Meeting
Tuesday, May 17, 1:00 p.m.–3:00 p.m., OCC, E146

Law Committee Meeting
Tuesday, May 17, 3:30 p.m.–5:30 p.m., OCC, E148
<table>
<thead>
<tr>
<th>Event Description</th>
<th>Date and Time</th>
<th>Location</th>
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<tbody>
<tr>
<td>Management Committee Meeting</td>
<td>Tuesday, May 17, 9:30 a.m.–11:30 a.m., OCC, E141</td>
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<tr>
<td>Membership Committee Meeting</td>
<td>Monday, May 16, 9:30 a.m.–11:30 a.m., OCC, E144</td>
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<tr>
<td>Minority SIG Meeting</td>
<td>Tuesday, May 17, 3:30 p.m.–5:30 p.m., OCC, E147</td>
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<tr>
<td>MSA/AIHA Reception</td>
<td>Tuesday, May 17, 6:30 p.m.–7:30 p.m., Hilton, Grand Ballroom</td>
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<tr>
<td>Nanotechnology Working Group Meeting</td>
<td>Tuesday, May 17, 3:30 p.m.–5:30 p.m., OCC, E146</td>
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<tr>
<td>Noise Committee Meeting</td>
<td>Wednesday, May 18, 1:00 p.m.–3:00 p.m., OCC, E146</td>
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<tr>
<td>Nonionizing Radiation Committee Meeting</td>
<td>Monday, May 16, 3:30 p.m.–5:30 p.m., OCC, E141</td>
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<tr>
<td>Occupational and Environmental Medicine Committee Meeting</td>
<td>Monday, May 16, 3:30 p.m.–5:30 p.m., OCC, E147</td>
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<tr>
<td>Occupational Epidemiology Committee Meeting</td>
<td>Monday, May 16, 10:00 a.m.–Noon, OCC, E141</td>
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<tr>
<td>Orange Council Meeting</td>
<td>Monday, May 16, Noon–1:00 p.m., OCC, E144</td>
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<tr>
<td>Past Presidents’ Brunch (by invitation)</td>
<td>Wednesday, May 18, 9:30 a.m.–11:00 a.m., The Nines, Georgian Room</td>
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<tr>
<td>President’s Reception (by invitation)</td>
<td>Wednesday, May 18, 6:30 p.m.–8:00 p.m., The Nines, Ballroom</td>
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<tr>
<td>PCIH–Risk Assessment Symposium Task Force Meeting</td>
<td>Wednesday, May 18, 1:30 p.m.–3:00 p.m., OCC, E142</td>
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<tr>
<td>Permanent Conference Committee Meeting</td>
<td>Wednesday, May 18, 4:00 p.m.–6:00 p.m., OCC, E143</td>
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<tr>
<td>Pharmaceutical Round Robin Committee Meeting</td>
<td>Wednesday, May 18, 8:00 a.m.–9:30 a.m., OCC, E143</td>
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<td>Practice, Standards and Guidelines Committee Meeting</td>
<td>Tuesday, May 17, 10:00 a.m.–Noon, OCC, E147</td>
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<tr>
<td>Protective Clothing and Equipment Committee Meeting</td>
<td>Monday, May 16, 3:30 p.m.–5:30 p.m., OCC, E142</td>
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<tr>
<td>Publications Committee Meeting</td>
<td>Tuesday, May 17, 9:30 a.m.–11:30 a.m., OCC, E144</td>
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<tr>
<td>Real-Time Detection Systems Committee Meeting</td>
<td>Monday, May 16, 1:00 p.m.–3:00 p.m., OCC, E146</td>
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<td>Red Council Meeting</td>
<td>Monday, May 16, Noon–1:00 p.m., OCC, E142</td>
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<tr>
<td>Respiratory Protection Committee Meeting</td>
<td>Monday, May 16, 9:30 a.m.–11:30 a.m., OCC, E142</td>
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<tr>
<td>Risk Assessment Committee Meeting</td>
<td>Monday, May 16, 1:00 p.m.–3:00 p.m., OCC, E141</td>
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<tr>
<td>Safety Committee Meeting</td>
<td>Monday, May 16, 3:30 p.m.–5:30 p.m., OCC, E144</td>
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<td>Sampling and Laboratory Analysis Committee Meeting</td>
<td>Tuesday, May 17, 1:30 p.m.–3:30 p.m., OCC, E144</td>
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<tr>
<td>Saturday PDC Monitors Meeting</td>
<td>Saturday, May 14, 7:00 a.m.–8:00 a.m., OCC, C124</td>
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<tr>
<td>Social Concerns Committee Meeting</td>
<td>Monday, May 16, 3:30 p.m.–6:30 p.m., OCC, E148</td>
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<tr>
<td>Stewardship and Sustainability Committee Meeting</td>
<td>Monday, May 16, 9:30 a.m.–11:30 a.m., OCC, E145</td>
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<tr>
<td>Sunday PDC Monitors Meeting</td>
<td>Sunday, May 15, 7:00 a.m.–8:00 a.m., OCC, C124</td>
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<tr>
<td>Toxicology Committee Meeting</td>
<td>Monday, May 16, 10:00 a.m.–Noon, OCC, E148</td>
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<td>Value Strategy Project Team Meeting</td>
<td>Tuesday, May 17, 4:00 p.m.–6:00 p.m., Hilton, Forum Suite</td>
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<tr>
<td>Violet Council Meeting</td>
<td>Wednesday, May 18, Noon–1:00 p.m., OCC, E142</td>
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<tr>
<td>Volunteer Group Chairs Meeting</td>
<td>Thursday, May 19, 8:00 a.m.–10:00 a.m., OCC, E145</td>
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<tr>
<td>Volunteer Group Secretaries Orientation Meeting</td>
<td>Thursday, May 19, 10:00 a.m.–Noon, OCC, E145</td>
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<tr>
<td>Volunteer Groups’ Joint Meeting</td>
<td>Monday, May 16, 6:30 a.m.–7:45 a.m., OCC, Oregon Ballroom</td>
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<tr>
<td>Volunteer Groups’ Joint Meeting</td>
<td>Tuesday, May 17, 6:30 a.m.–7:45 a.m., OCC, Oregon Ballroom</td>
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<tr>
<td>Volunteer Recognition Reception (by invitation)</td>
<td>Monday, May 16, 7:30 p.m.–9:00 p.m., Hilton, Pavilion Ballroom</td>
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<tr>
<td>WEEL Committee Meeting</td>
<td>Thursday, May 19, 8:00 a.m.–5:00 p.m., Hilton, Directors Suite</td>
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<tr>
<td>Yellow Council Meeting</td>
<td>Monday, May 16, Noon–1:00 p.m., OCC, E143</td>
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<tr>
<td>AIHA Local Sections</td>
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<tr>
<td>Local Section Council Business Meeting</td>
<td>Tuesday, May 17, 4:00 p.m.–6:00 p.m., OCC, E145</td>
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<tr>
<td>Local Sections Officers Training</td>
<td>Thursday, May 19, 10:00 a.m.–Noon, OCC, E146</td>
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<tr>
<td>Student Local Sections Council Business Meeting</td>
<td>Tuesday, May 17, 2:00 p.m.–4:00 p.m., OCC, E142</td>
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<tr>
<td>AIHA Student and Early Career Professionals</td>
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<tr>
<td>Student and Early Career Professionals Committee Meeting</td>
<td>Thursday, May 19, 8:00 a.m.–10:00 a.m., OCC, E141</td>
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<tr>
<td>Students and Early Career Professionals Committee Mentoring Happy Hour</td>
<td>Monday, May 16, 5:00 p.m.–7:00 p.m., Kells Irish Restaurant &amp; Pub, 112 SW 2nd Avenue</td>
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<tr>
<td>Student Local Sections Council Business Meeting</td>
<td>Tuesday, May 17, 2:00 p.m.–4:00 p.m., OCC, E142</td>
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<td>AIHF</td>
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<tr>
<td>Board of Trustees Meeting</td>
<td>Tuesday, May 17, 3:30 p.m.–5:30 p.m., Hilton, Council Suite</td>
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<td>JOEH</td>
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<tr>
<td>Editorial Review Board Meeting</td>
<td>Sunday, May 15, 7:00 p.m.–9:00 p.m., Hilton, Forum Suite</td>
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<tr>
<td>JOEH LLC Board Meeting</td>
<td>Tuesday, May 17, 4:00 p.m.–6:00 p.m., Hilton, Cabinet Suite</td>
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<td>ACGIH*</td>
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<tr>
<td>Board of Directors Meeting</td>
<td>Monday, May 16, 8:00 a.m.–3:00 p.m., Hilton, Directors Suite</td>
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<tr>
<td>FOHS Board of Trustees Meeting</td>
<td>Monday, May 16, 10:30 a.m.–Noon, OCC, VIP Suite D</td>
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<tr>
<td>Membership Reception and Annual Meeting of the Membership</td>
<td>Sunday, May 15, 6:00 p.m.–7:30 p.m., Hilton, Grand Ballroom II</td>
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New Benefit!

Access all digitally captured AIHce sessions online as multimedia recreations that include speaker presentations synced to PowerPoint slides. Links to the Abstract Book as well as interactive features such as search, rating and chat functions make this a robust option for attendees to access up to 250 hours of AIHce 24/7!

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* Please note, if you purchased the Premium Registration package during registration, you automatically will receive a code via email to access AIHce On Demand after AIHce 2011.
Friday, May 13

8:30 a.m.-5:00 p.m.
PDC 106 GHS: The New Hazard Communication
OCC, A106
PDC 107 If I’m Teaching, Why Aren’t They Learning? How to Provide World Class Training That Works
OCC, D131
PDC 108 Implementing a Combustible Dust Program
OCC, E145
PDC 110 Investigative Photography
OCC, A103
PDC 111 Mold Recognition, Effective Sampling Strategies and Results Interpretation
OCC, E148
PDC 112 Practical Applications for Portable Radiation Instruments
OCC, D138
PDC 113 Surface Sampling for Metals: Issues, Methods, and Strategy
OCC, D139
PDC 114 Taking the LEED: Putting the Human Element Back into Green Building
OCC, A108
PDC 115 The Derivation of Occupational Exposure Levels
OCC, B111
PDC 116 Topics in Product Stewardship: Chemical and Consumer Products Risk Management
OCC, F149
PDC 117 Toxicology of Chemical Agents That Could Put You on the TSA No Fly List
OCC, B117
PDC 118 Vapor Intrusion Investigation and Mitigation: Advances in Assessment and Practice
OCC, D135

8:30 a.m.-12:30 p.m.
PDC 201 Scanning for Safety: How to Recognize Hazards in the Workplace
OCC, C126
PDC 202 Worker Fatigue Risk Management: Applying New Standards to Improve H&S
OCC, C120

4:00 p.m.-6:00 p.m.
Registration and Hotel Reservations
OCC, Lobby A

Saturday, May 14

7:00 a.m.-8:00 a.m.
Saturday PDC Monitors Meeting
OCC, C124

7:00 a.m.-5:30 p.m.
Registration and Hotel Reservations
OCC, Lobby A

7:30 a.m.-5:30 p.m.
Speaker Ready Room
OCC, C124

8:00 a.m.-5:00 p.m.
PDC 101 Anticipation, Recognition, Evaluation and Control of Welding Health Hazards
OCC, D136
PDC 102 Bayesian Statistics: Overview and Applications in IH Data Interpretation and Exposure Risk Assessment
OCC, F150
PDC 103 EHS Management Systems 101
OCC, D133
PDC 104 Ergonomics Toolkit: Basic Application of Common Ergonomic Assessment Tools
OCC, D137
PDC 105 Fundamentals of Nonionizing Radiation
OCC, A105

8:30 a.m.-5:00 p.m.
P001 Certified Safety Professional (CSP) Exam Preparation Workshop
Hilton, Pavilion, Ballroom East

8:30 a.m.-5:30 p.m.
P002 Essentials of Hazardous Materials Management (EHMM). A Preparatory Course for the CHMM Exam
Hilton, Parlor

8:30 a.m.-5:30 p.m.
P003 Management Certificate Course II: Action Tools for Successful OEHS Management and Leadership
OCC, B118

PDC 701 Basic Electrical Safety with Application of NFPA 70E
OCC, B115
PDC 702 Construction Hazard Recognition and Control
OCC, B114
PDC 703 Exposure Assessment Strategies and Statistics
OCC, B113
PDC 707 Professional Judgment in Exposure Assessment Decision-making
OCC, B112
PDC 709 Using Mathematical Models to Estimate Exposures
OCC, B116

1:30 p.m.-5:30 p.m.
PDC 301 Ergo 101
OCC, C126
PDC 302 Introduction to EHS for the Nanotechnology Industry
OCC, C120

AIHA

9:00 a.m.-5:00 p.m.
Academy of Industrial Hygiene Meeting
Hilton, Studio Suite
Analytical Accreditation Board Meeting
Hilton, Alexanders, 23rd Floor
### At-a-Glance: Sunday

#### Sunday, May 15

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<tr>
<th>Time</th>
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| 7:00 a.m.-8:00 a.m. | Sunday PDC Monitors Meeting  
OCC, C124                                                                 |              |
| 7:00 a.m.-5:30 p.m. | Registration and Hotel Reservations  
OCC, Lobby A                                                                              |              |
| 7:30 a.m.-5:00 p.m. | Volunteer Collaboration Café  
OCC, Lobby C                                                                               |              |
| 7:30 a.m.-5:30 p.m. | Speaker Ready Room  
OCC, C124                                                                 |              |
| 8:00 a.m.-5:00 p.m. | SYM010 Symposium: Conquering Industrial Hygiene Problems with the Use of Real-Time Monitors  
OCC, Portland 252                                                      |              |
| 8:00 a.m.-5:00 p.m. | PDC 401 Methods and Applications for Exposure Assessment Chemical Detection in Real Time  
OCC, D136                                                             |              |
| 8:00 a.m.-5:00 p.m. | PDC 402 Application of Advanced Ergonomic Assessment Tools in the Ergonomic Toolkit  
OCC, A108                                                              |              |
| 8:00 a.m.-5:00 p.m. | PDC 403 Applying and Implementing Real World Health Hazard and Control Banding Strategies  
OCC, B111                                                             |              |
| 8:00 a.m.-5:00 p.m. | PDC 404 Applying Business Skills for Presentations to Executive Management  
OCC, E144                                                              |              |
| 8:00 a.m.-5:00 p.m. | PDC 406 Beryllium Worker Protection: A Model for Success  
OCC, E149                                                             |              |
| 8:00 a.m.-5:00 p.m. | PDC 407 Biological Monitoring: A "How To" Guide and Case Studies  
OCC, E142                                                              |              |
| 8:00 a.m.-5:00 p.m. | PDC 408 Biosafety 2: Advanced Biohazard Control Concepts  
OCC, E148                                                              |              |
| 8:00 a.m.-5:00 p.m. | PDC 410 Clandestine Drug Labs: H&S Aspects in First Response, Assessment, and Remediation  
OCC, D139                                                              |              |
| 8:00 a.m.-5:00 p.m. | PDC 411 Engineering Controls to Minimize Fugitive Dusts  
OCC, E145                                                              |              |
| 8:30 a.m.-12:30 p.m. | PDC 501 Environmental Health and Safety in the European Union  
Hilton, Broadway III                                                      |              |
| 8:30 a.m.-4:00 p.m. | PDC 502 Exposure Assessment Using Whole Air Sampling Methods  
Hilton, Broadway II                                                     |              |
| 8:30 a.m.-5:00 p.m. | PDC 503 Managing Nanomaterial Hazards for EHS Professionals  
Hilton, Salon, Executive Tower                                           |              |
| 8:30 a.m.-5:30 p.m. | PDC 504 Particle Size-Selective (Inhalable, Thoracic and Respirable) Aerosol Sampling  
Hilton, Galleria South                                                  |              |
| 8:30 a.m.-5:00 p.m. | P001 Certified Safety Professional (CSP) Exam Preparation Workshop  
Hilton, Pavilion Ballroom West                                          |              |
| 8:30 a.m.-5:30 p.m. | P002 Essentials of Hazardous Materials Management (EHMM). A Preparatory Course for the CHMM Exam  
Hilton, Parlor                                                          |              |
| 8:30 a.m.-5:00 p.m. | P003 Management Certificate Course II: Action Tools for Successful OEHS Management and Leadership  
OCC, B118                                                              |              |
| 8:30 a.m.-5:00 p.m. | PDC 701 Basic Electrical Safety with Application of NFPA 70E  
OCC, B115                                                              |              |
| 8:30 a.m.-5:00 p.m. | PDC 702 Construction Hazard Recognition and Control  
OCC, B114                                                              |              |
| 8:30 a.m.-5:00 p.m. | PDC 703 Exposure Assessment Strategies and Statistics  
OCC, B113                                                              |              |
| 8:30 a.m.-5:00 p.m. | PDC 704 Professional Judgment in Exposure Assessment Decision-making  
OCC, B112                                                              |              |
| 8:30 a.m.-5:00 p.m. | PDC 705 Using Mathematical Models to Estimate Exposures  
OCC, B116                                                              |              |
### AIHA*

- **8:00 a.m.-4:30 p.m.**
  - Board of Directors Meeting
  - Hilton, Directors Suite

- **4:00 p.m.-6:00 p.m.**
  - Joint Industrial Hygiene Ethics Education Committee Meeting
  - Hilton, Boardroom East

- **5:30 p.m.-7:30 p.m.**
  - AIHA Accredited Laboratory Forum
  - Portland, 252

- **6:00 p.m.-10:00 p.m.**
  - Academic Accreditation Committee Meeting
  - Hilton, Executive Suite

- **8:00 p.m.-11:00 p.m.**
  - Future Leaders and Young Members Reception (by invitation)
  - Spirit of 77, 500 NE MLK Jr., Blvd.

### ACGIH®

- **8:00 a.m.-3:00 p.m.**
  - Board of Directors Meeting
  - Hilton, Directors Suite

- **6:00 p.m.-7:30 p.m.**
  - ACGIH Membership Reception and Annual Meeting of the Membership
  - Hilton, Grand Ballroom 2

### JOEH

- **7:00 p.m.-9:00 p.m.**
  - JOEH Editorial Review Board Meeting
  - Hilton, Forum Suite

### Ancillary

- **7:30 a.m.-5:00 p.m.**
  - ABIH Board Meeting
  - Hilton, Studio Suite

- **8:00 a.m.-5:00 p.m.**
  - Board of Certification in Professional Ergonomics (BCPE) Certification Examination
  - Hilton, Executive Suite

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**AIHce 2011 Blood Drive**

**Monday, May 16**

**10:00 a.m.-3:00 p.m.**

The need is constant. The gratification is instant.

Give Blood.

Identification required.

All donors automatically entered into a drawing for cash prizes of $250, $150 and $100. Swipe your Expocard at the door. Winners will be notified by email on Tuesday.

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Note Meeting Rooms...

OCC = Oregon Convention Center
Take advantage of 15% off all AIHA publications and education, and enjoy free shipping for AIHA members. Check out these new titles that are debuting at AIHce:

- The Occupational Environment: Its Evaluation, Control, and Management, 3rd edition
- Industrial Hygiene Reference & Study Guide, 3rd edition
- 2011 ERPG/WEEL Handbook and Update Sets
- Monitoring for Health Hazards at Work, 4th edition

More!
View the newly updated www.aiha.org, and get information about membership, upcoming events and other AIHA products and services from AIHA Staff.

Special book signing event!
Following the Opening Session, Gene Kranz will be signing his book, *Failure Is Not an Option: Mission Control From Mercury to Apollo 13 and Beyond*, on Monday at 10 a.m.

Visit AIHA’s InfoCentral at booth # 913 for special events, giveaways, hot new products and much more! It’s the place to be!
Get the training the workplace demands...

- Occupational Hygiene
- Environmental Risk Assessment
- Risk Management

The Department of Environmental Health Sciences offers a flexible, *Part-time/Internet-based Master of Science in Public Health (MSPH)* in Occupational & Environmental Hygiene and a graduate *Certificate in Environmental & Occupational Health*.

For more information, stop by booth #2154 or visit: www.jhsph.edu/dept/ehs
Monday, May 16
7:00 a.m.-5:30 p.m.
Registration and Hotel Reservations
OCC, Lobby A
7:30 a.m.-5:00 p.m.
Press Room
OCC, D132
Volunteer Collaboration Café
OCC, Lobby C
7:30 a.m.-5:30 p.m.
Speaker Ready Room
OCC, C124
8:00 a.m.-9:30 a.m.
Opening General Session: Failure Is Not an Option
Gene Kranz, NASA Flight Control Director and Presidential Medal of Freedom Recipient
Houston, TX
OCC, Portland Ballroom

8:00 a.m.-4:00 p.m.
AIHA CareerAdvantage Development Fair 2011
OCC, Hall A

9:00 a.m.-5:30 p.m.
Visit the Expo!
OCC, Halls B-E
Daily Prizes, Special Displays, Cyber/Message Centers, Restaurants, Lounges, Expo Theater
No sessions 9:30 a.m.-10:30 a.m. and 12:30 p.m.-2:00 p.m.

10:00 a.m.-11:30 a.m.
Welcome to Portland Brunch
(Admission by ticket)
Hilton, Alexanders, 23rd Floor
10:00 a.m.-1:00 p.m.
TT-01 Stimson Lumber Company
OCC, Bus departs MLK entrance; board by 9:45 a.m.
10:00 a.m.-2:00 p.m.
Exhibitor Product Demos and Presentations
Expo Theater, Hall D
See presentation descriptions on pages 36 and 41

10:00 a.m.-3:00 p.m.
Blood Drive
OCC, A103

10:30 a.m.-11:30 a.m.
CR 301 Changing a Safety Culture: How Leadership and Front-Line Think
OCC, D136
CR 302 Conflict Management and Resolution for Safety Professionals
OCC, D138

10:30 a.m.-12:10 p.m.
PO 105 Laboratory Health and Safety
OCC, B119

10:30 a.m.-12:30 p.m.
Late Breaking: Nuclear Emergency in Japan - Physics and Hazards
OCC, F149
PO 101 Asbestos Exposure Assessment Strategies
OCC, A108
PO 102 Ergonomics: Shoulders, Back and Lower Extremities
OCC, B110
PO 103 Exposure Modeling Strategies
OCC, Oregon 203
PO 104 Noise Protection, Training, Measurement and Reduction
OCC, Oregon 202
RT 201 Case Studies on Nonionizing Radiation
OCC, F152
RT 202 Essential Hazardous Materials and Emergency Response Resources and Tools for the IH
OCC, B116
RT 203 Managing Moisture on Construction Sites
OCC, A106
RT 204 Taking the Mystery Out of Mentoring: Practical Tools to Make a Real Difference
OCC, C121
RT 205 U.S. Chemical and Occupational Health Regulation and Policy for Engineered Nanomaterials
OCC, Oregon 201
RT 206 AIHA® Value Strategy Session on Case Studies
OCC, B113

11:30 a.m.-12:30 p.m.
CR 303 Dust Explosion Hazard Assessment--Including OSHA Combustible Dust National Emphasis Program
OCC, Oregon 204

12:30 p.m.-1:30 p.m.
Luncheon Discussions—Students and Early Career Professionals
OCC, Expo, Hall D

12:30 p.m.-2:00 p.m.
Unsolved IH Mysteries Workshop
OCC, D133

12:30 p.m.-4:30 p.m.
ST-01 Portland Highlights
Depart the OCC MLK Lobby at 12:15 p.m. and the Hilton, 6th St., at 12:30 p.m.

1:00 p.m.-2:00 p.m.
Jeffrey S. Lee Lecture
OCC, Oregon 202

1:00 p.m.-5:00 p.m.
TT-02 Kaiser Permanente Medical Center
OCC, Bus departs MLK entrance; board by 12:45 p.m.

2:00 p.m.-3:00 p.m.
CR 304 Using ISO Life Cycle Assessment Standards
OCC, B110
CR 305 Consumer Product Toxicology
OCC, B119

2:00 p.m.-4:20 p.m.
PO 106 Biosafety and Environmental Microbiology I: Allergens, Fungi, and IEQ--What’s New?
OCC, A106

2:00 p.m.-4:30 p.m.
RT 207 Defining and Evaluating Data Quality
OCC, B116

2:00 p.m.-4:40 p.m.
PO 107 Engineering and Control Technology
OCC, D138
PO 108 General Topics in Occupational Safety
OCC, D139

2:00 p.m.-5:00 p.m.
PO 109 Risk Assessment Case Studies
OCC, D136
PO 110 Management and Training Issues: Communication
OCC, A108

RT 208 Building a Green Laboratory in the 21st Century
OCC, C121
RT 209 Environmental Noise: 35 Years and Counting—Implications for Industrial Hygiene
OCC, F152
RT 210 Living with Differences: Addressing Standards for Respirator Selection/Use Worldwide
OCC, F149
2:00 p.m.-6:00 p.m.
RT 211 Glen Williamson Forum: OSHA’s Most Interesting Health Cases, 2008-2010
OCC, Oregon 201
RT 212 Nanotechnology: Advances in Medical Surveillance and Occupational Health
OCC, Oregon 203
RT 213 Occupational Exposure Limits: Global and Domestic Perspectives from Across the Field
OCC, Oregon 204
RT 214 OSHA’s Injury and Illness Prevention Program Rulemaking
OCC, B113
2:30 p.m.-5:30 p.m.
SS 001 Science Symposium: Inhalable Particles—The State of the Science on a Big Particle Problem
OCC, Oregon 202
3:30 p.m.-4:30 p.m.
CR 306 Emergency Management and EHS: We’ve Come a Long Way in 10 Years
OCC, B110
CR 307 Overview of Recent Substantive Federal Environmental, Health, and Safety Rulemaking
OCC, B119
4:00 p.m.-5:30 p.m.
Expo Opening Cocktail Reception
OCC, Expo, Hall B-E
This is the perfect opportunity to meet this year’s exhibitors, browse the technical posters, visit with colleagues and learn about new products and services from AIHA® and ACGIH*.

4:00 p.m.-8:00 p.m.
ST-02 MicroBrew Hop
Depart the OCC MLK Lobby at 3:45 p.m. and the Hilton, 6th St., at 4:00 p.m.

ACGIH*
10:30 a.m.-Noon
FOHS Board of Trustees Meeting
OCC, VIP Suite D

AIHA®
6:30 a.m.-7:45 a.m.
Volunteer Groups’ Joint Meeting
OCC, Oregon Ballroom
7:30 a.m.-9:30 a.m.
ANSI/AIHA Z88.12 Subcommittee Meeting
OCC, E147
9:30 a.m.-11:30 a.m.
Exposed Spaces Committee, Meeting
OCC, E143
Membership Committee Meeting
OCC, E144
Respiratory Protection Committee Meeting
OCC, E142
Stewardship and Sustainability Committee Meeting
OCC, E145
10:00 a.m.-Noon
Biosafety and Environmental Microbiology Committee Meeting
OCC, E146
Occupational Epidemiology Committee Meeting
OCC, E141
Toxicology Committee Meeting
OCC, E148
Noon-1:00 p.m.
Orange Council Meeting
OCC, E144
Red Council Meeting
OCC, E142
Yellow Council Meeting
OCC, E143
Academy Conference Team Meeting
OCC, VIP Suite D
1:00 p.m.-3:00 p.m.
Ionizing Radiation Committee Meeting
OCC, E148
Real-Time Detection Systems Committee Meeting
OCC, E146
Risk Assessment Committee Meeting
OCC, E141
1:30 p.m.-3:30 p.m.
Biological Monitoring Committee Meeting
OCC, E143
2:00 p.m.-4:30 p.m.
Finance Committee Meeting
OCC, VIP Suite D
2:00 p.m.-6:00 p.m.
Continuing Education Committee Meeting
Hilton, Forum Suite
International Affairs Committee Meeting
Hilton, Galleria South
3:00 p.m.-5:00 p.m.
International Training/Qualifications in OH Meeting
OCC, C126
3:30 p.m.-5:30 p.m.
BEEL Committee Meeting
OCC, E143
Nonionizing Radiation Committee Meeting
OCC, E141
Occupational and Environmental Medicine Committee Meeting
OCC, E147
Protective Clothing and Equipment Committee Meeting
OCC, E142
Safety Committee Meeting
OCC, E144
3:30 p.m.-6:30 p.m.
Social Concerns Committee Meeting
OCC, E148
5:00 p.m.-7:00 p.m.
Students and Early Career Professionals Committee Mentoring Happy Hour
Kelli Irish Pub, 112 SW 2nd Avenue
6:30 p.m.-8:00 p.m.
International Reception (by invitation)
Hilton, Grand Ballroom I
7:30 p.m.-9:00 p.m.
Volunteer Recognition Reception (by invitation)
Hilton, Pavilion Ballroom

Ancillary
5:00 p.m.-9:00 p.m.
Department of Energy (DOE) and DOE Contractor Industrial Hygiene Meeting
Doubletree, Alaska
6:00 p.m.-8:00 p.m.
EMSL Customer Appreciation Cocktail Party (by invitation only)
Hilton, Galleria North
Harvard Alumni Reception
Hilton, Directors Suite
6:30 p.m.-8:00 p.m.
Johns Hopkins Reception
Hilton, Broadway

Note Meeting Rooms...
OCC = Oregon Convention Center
OPENING GENERAL SESSION

8:00 a.m.–9:30 a.m.  
OCC, Portland Ballroom

Failure Is Not an Option

Gene Kranz  
NASA Flight Control Director and  
Presidential Medal of Freedom  
Recipient  
Houston, TX

Gene Kranz is best known as the leader of the “Tiger Team” of flight directors who brought the Apollo 13 spacecraft and its crew of three astronauts back to Earth on April 17, 1970, after its oxygen system failed.

The hit film Apollo 13 chronicles Kranz’s extraordinary struggle to improvise and devise a rescue plan under a scenario of extreme time pressure, many unknowns, and no real precedents. A New York Times best-selling author, Kranz’s book Failure is Not an Option chronicles his work in NASA’s Mission Control from Project Mercury through Apollo 13 and beyond.

Kranz served as flight director for the 33 missions of Projects Gemini, Apollo, and Skylab and led the flight control team during its first lunar landing. For demonstrating extraordinary courage and heroism, he was co-recipient of the Presidential Medal of Freedom awarded by President Nixon for the Apollo Mission and was designated a Distinguished Member of the Senior Executive Service by President Reagan.

After 37 years of service at NASA and in the Air Force, Kranz retired, keeping very busy with consulting and speaking to professional, civic, and youth groups. He built an aerobatic biplane and serves as flight engineer on a B-17 “Flying Fortress” performing at air shows throughout the United States.

From 10:00 a.m.–11:00 a.m., Mr. Kranz will be available in the AIHA booth to sign copies of his book, Failure is Not an Option: Mission Control from Mercury to Apollo 13.

This opening session is sponsored by

10:00 a.m.  
A New Passive Sampler for Low Level VOC Measurements, SKC  
SKC will demonstrate a new passive sampler designed for ppb level measurements of organic vapors. The new Ultra III features significant design improvements over previous models. A slide cover enhances ease of use, a separate sorbent section allows for blank determinations, and ports on the back of the device allow for sorbent transfer for thermal desorption and GC analysis. The Ultra III offers users the simplicity of passive sampling and the low detection limits evidenced with canisters without the hassle and expense.

10:30 a.m.  
3E Mobile: Putting MSDS Management in the Palm of Your Hand, 3E Company  
A demonstration of 3E Mobile, which provides 3E Online-MSDS customers with the ability to search for and view MSDSs from hand-held devices.

11:30 a.m.  
When the Dust Settles: A Brief Tutorial on Combustible Dust and Preventive Housekeeping, Nilfisk Industrial Vacuums  
In recent times, combustible dust has become a key concern for all manufacturing industries. This brief presentation reviews the combustible dust issue, best practices for preventive maintenance, and a tutorial on choosing a properly equipped industrial vacuum cleaner, in order to dramatically decrease the risk of a combustible dust fire or explosions.

Noon  
Area Monitoring Sampling Kit to Collect Multiple Airborne Contaminants from Chemical/Petroleum Spills, Galson Laboratories  
Many different chemicals may need to be collected at a chemical or petroleum spill site. This kit allows the sampler to collect several different chemicals at the same time and place, indoors or out. A few applications: fenceline monitoring at remediation sites; petroleum spills; chemical spills; and railroad tank cars leaks. The kit is designed to allow sampling devices to be added or removed, depending on the contaminants of interest, and it affords protection against outdoor elements.

12:30 p.m.  
New, Mobile and Wireless Area Monitoring and Fence Line System, Draeger Safety, Inc.  
The new Draeger X-zone 5000 provides rapid area monitoring and fence line protection using a mobile alarming device along with the Draeger X-am 5000 portable monitor. The units can be networked to provide increased safety, lower cost of ownership and improved productivity to any company.

Showtime 7:45 a.m.  
The Last Regiment of Syncopated Drummers  
Enjoy one of the few remaining syncopated drum corps! This high energy group incorporates both military style rudiments with “street beat” rhythms. Notable clients include the Portland Trailblazers and Nike.
Changing a Safety Culture: How Leadership and Front-Line Think

CR 301

10:30 a.m.–11:30 a.m. + OCC, D136

Presenter: R. Horan, Aramark, West Chester, PA. Moderator: S. Weeks, Hargrove Engineers + Constructors, Mobile, AL.


Changing a safety culture requires an authentic commitment at the leadership level and effective participation from front-line workers. As a front-line worker for 15 years at a large utility company, I have lived through several culture changes. As a safety professional and manager, I was actively involved during two distinct safety culture transitions. With 32 years’ experience, I have learned how the culture of an organization sets the tone for everything in safety.

Conflict Management and Resolution for Safety Professionals

CR 302

10:30 a.m.–11:30 a.m. + OCC, D138

Presenter: J. Klane, Klane’s Education Information Training Hub, LLC (KEITH), Fairfield, ME. Moderator: D. Gibbon, Rocky Mountain Power, Salt Lake City, UT.

Safety professionals often have to manage or resolve conflicts. These may be between workers, managers, trainees, building occupants, building representatives, etc. Traditional “positional” conflict management (i.e., typical compromises) often fail to satisfy either party. We will look at what works, what doesn’t, and why more progressive techniques work best. Case examples will be discussed and attendee cases are welcome.

Asbestos Exposure Assessment Strategies

PO 101

10:30 a.m.–12:30 p.m. + OCC, A108

Arranger: M. Vadali, University of Minnesota, Brooklyn Park, MN. Moderator: B. Graffeo, Eli Lilly, Indianapolis, IN.

Monitors: S. Arnold, EHS LLC, Roswell, GA; R. Rogers, U. S. Army, Bel Air, MD.

10:30 a.m.

The Use of Analogous Materials to Assess Historical Exposures — An Example Using Asbestos Cloth Products. (PO 101-1) M. Holton, R. Adams, ENVIRON International Corporation, Princeton, NJ.
PO 102: Ergonomics: Shoulders, Back and Lower Extremities
10:30 a.m.–12:30 p.m. + OCC, B110
Arranger and Moderator: M. O’Reilly, Albany University, Albany, NY. Monitors: J. Haney, New York Department of Labor, Syracuse, NY; L. Orta Anés, University of Puerto Rico, San Juan, PR.

10:30 a.m.
Risk Factors Associated with Low-Back Injuries among University Residence Hall Employees Based on Ergonomic and Lifestyle Choices. (PO 102-1) B. Bidassie, J. McGoilthlin, Purdue University, West Lafayette, IN.

10:50 a.m.
Can Adding a Seat Cushion Reduce Exposure to Whole-Body Vibration? (PO 102-2) S. Chervak, US Army, Aberdeen Proving Ground, MD.

11:10 a.m.
R. Blood, P. Rynell, P. Johnson, University of Washington, Seattle, WA.

11:30 a.m.
An Analysis of the Clearance Between Electric Utility Fleet Vehicle Pedals and Adjacent Structures for Worker Anthropometry and Safe Driving Conditions. (PO 102-4) P. Seeley, Ergonomics Solutions, LLC, Wales, WI; R. Marklin, K. Saginus, Marquette University, Milwaukee, WI; S. Freier, Dueco, Waukesha, WI.

11:50 a.m.
A Radiologic Study of Correlation Between Lumbar Spine Geometry and Gross Anthropometry. (PO 102-5)
R. Tang, R. Sesek, Auburn University, Auburn, AL.

12:10 p.m.
Simple Ergonomic Assessment Tools and Design Guidelines for the Oil, Gas, and Petrochemical Industries. (PO 102-6)
B. McGowan, Humantech, Inc., Ann Arbor, MI.

PO 103: Exposure Modeling Strategies
10:30 a.m.–12:30 p.m. + OCC, Oregon 203

10:30 a.m.
Bayesian Statistics Spreadsheets for Exposure Assessment. (PO 103-1) S. Kim, M. Virji, NIOSH, Morgantown, WV; S. Shulman, M. Waters, NIOSH, Cincinnati, OH.

10:50 a.m.
Application of Traditional and Bayesian Statistics in Chemical Exposure Assessments of Factories Located Outside of the United States. (PO 103-2)
M. Andrew, Sumerra, Hong Kong; T. Chen, Forensic Analytical Consulting Services, Inc., Hayward, CA.

11:10 a.m.
Comparison of Mechanistic and Semi-Empirical Two-Zone Models for Estimating Dust Exposures. (PO 103-3)
R. Jones, C. Simmons, P. Boeher, ENVIRON International Corporation, Chicago, IL.

11:30 a.m.
Accurate Analysis of Log-normally Distributed Exposure Data Subject to Single or Multiple Detection Limits. (PO 103-4)
T. Mathew, University of Maryland, Baltimore, MD; K. Krishnamoorthy, University of Louisiana at Lafayette, Lafayette, LA.

11:50 a.m.
IH SkinPerm: Estimating Dermal Dose. (PO 103-5)
R. Tibaldi, ExxonMobil, Baytown, TX; D. Drolet, Longueuil, QC, Canada; W. ten Berg, Santoxar, Westervoort, Netherlands.

12:10 p.m.
Stoffenmanager: Bringing Science into Practice. (PO 103-6)

PO 104: Noise Protection, Training, Measurement and Reduction
10:30 a.m.–12:30 p.m. + OCC, Oregon 202
Arranger: C. Richards, NY. Moderator: S. Hacker, Novus International, St. Charles, MO. Monitors: M. Horowitz, OSHA, CA; M. Jones, Department of Veterans Affairs, Iowa City, IA.

10:30 a.m.
User Efficacy in Fitting Hearing Protection. (PO 104-1) T. Schulz, Sperian Protection, Fredericktown, PA; R. Miller, US Airways, Pittsburgh, PA.

10:50 a.m.
Pilot Research Project in Quantitative Earmuff Noise Insertion Loss Characterization. (PO 104-2) S. Caporali-Filho, University of Puerto Rico, San Juan, PR.

11:10 a.m.
Evaluation of the NIOSH Hearing Loss Simulator. (PO 104-3) R. Randolph, NIOSH, Pittsburgh, PA.

11:30 a.m.
Applying New Noise Criteria to the Workplace. (PO 104-4) J. Ratliff, Kanto Corporation, Portland, OR.

11:50 a.m.

12:10 p.m.
Cost and Human Impact Analysis of Noise Control Solutions. (PO 104-6) E. Miller-Klein, SSA Acoustics, LLP, Seattle, WA.

RT 201: Case Studies on Nonionizing Radiation
10:30 a.m.–12:30 p.m. + OCC, F152
Arranger: K. Merritt, Safety and Quality Assurance Alliance, Hampton, VA.

10:30 a.m.
Nonionizing radiation presents a broad spectrum of hazards in the occupational and general environment. Case studies of real-life situations will be presented for several portions of the nonionizing spectrum.


Defibrillator Implants: Occupational Exposure to Electromagnetic Radiation. B. Murdoch, Argonne National Laboratory, Argonne, IL.

Magnetic Particle Inspection Equipment and Active Medical Implants. D. Baron, DB-Emf, Austin, TX.

CAMEO — Software to Support Emergency Management. M. Miller, National Oceanic and Atmospheric Administration, Seattle, WA.

Chemical Emergency Medical Management (CHEMM) Website and Applications. P. Hakkinen, National Library of Medicine, Bethesda, MD.


Water damage during the construction process has been a significant quality control concern and is now a major environmental issue with respect to mold growth and damp building exposure. The causes and dynamics of construction moisture, along with control measures, will be discussed. Integrating moisture prevention into project planning and site management will be emphasized. Unique conditions present during construction limit the use of traditional testing and remediation procedures generally used by industrial hygienists to address mold growth. More specific mold controls needed to protect patients during hospital renovation will also be presented.

Controlling Water Damage and Mold During Construction: A General Contractor’s Perspective. S. Blanchard, Hunt Construction Group, Indianapolis, IN.

Moisture in the Construction Process. M. Williams, Williams Building Diagnostics, Bradenton, FL.

The Industrial Hygienist’s Role in Preventing Mold Growth During Construction. B. Epstien, Epstien Environmental Resources, LLC, Marietta, GA.


Mold Control During Hospital Construction. L. Lee, Pacific Industrial Hygiene, Kirkland, WA.

RT 203

Managing Moisture on Construction Sites

10:30 a.m.–12:30 p.m. + OCC, A106


Water damage during the construction process has been a significant quality control concern and is now a major environmental issue with respect to mold growth and damp building exposure. The causes and dynamics of construction moisture, along with control measures, will be discussed. Integrating moisture prevention into project planning and site management will be emphasized. Unique conditions present during construction limit the use of traditional testing and remediation procedures generally used by industrial hygienists to address mold growth. More specific mold controls needed to protect patients during hospital renovation will also be presented.

Controlling Water Damage and Mold During Construction: A General Contractor’s Perspective. S. Blanchard, Hunt Construction Group, Indianapolis, IN.

Moisture in the Construction Process. M. Williams, Williams Building Diagnostics, Bradenton, FL.

The Industrial Hygienist’s Role in Preventing Mold Growth During Construction. B. Epstien, Epstien Environmental Resources, LLC, Marietta, GA.


Mold Control During Hospital Construction. L. Lee, Pacific Industrial Hygiene, Kirkland, WA.

RT 204

Taking the Mystery Out of Mentoring: Practical Tools to Make a Real Difference 10:30 a.m.–12:30 p.m. + OCC, C121


As a strategy for helping people to thrive on the job, in life and at school, mentoring works. It aids in the confidence, resources and support that is needed to achieve their potential. These positive outcomes are only possible when these individuals are engaged in high-quality mentoring relationships. Utilizing evidence-based standards for practice and incorporating the latest research, this discussion will help participants begin the process of transferring their invaluable skills and knowledge to the future leaders of the industrial hygiene profession through mentorship. This will be a highly interactive roundtable focusing on the role of the mentor in professional and personal development. Special insight is provided from professionals as well as students who have participated in successful mentoring programs.

What Does a Mentor Really Do, Anyway? B. Lewis, NIOSH, Morgantown, WV.

Understanding Your Audience: A Student and Young Professional’s Perspective. B. Middaugh, Purdue University, Zionsville, IN.

Mentoring: Roadblocks and Solutions. N. Greeson, Duke University, Durham, NC.


From Clark Kent to Superman: Changing Lives through the AIHA Mentoring Program. M. Rupert, Concenra EHS, Cincinnati, OH.

The findings and conclusions in the National Institute for Occupational Safety and Health abstract presentations have not been formally disseminated by the National Institute for Occupational Safety and Health and should not be construed to represent any agency determination or policy.
Commercialization of nanotechnology has been growing at an unprecedented rate while EHS research on engineered nanomaterials is only beginning to pick up its pace. Knowledge gaps concerning their toxicity, exposure assessment and risk assessment will likely take some time to fill. Meanwhile, regulatory agencies are taking cautious steps in forming regulation. This roundtable brings together representatives from EPA, OSHA, and the Environmental Law Institute for a lively discussion on current chemical and occupational health regulation and policy for engineered nanomaterials. Following is a case study of how Intel Corporation manages engineered nanomaterials risk.

- **Nanomaterials: OSHA’s Approach to Protecting Workers from Potential Hazards.** J. Carter, OSHA, Washington, DC.
- **Experiences with Nanomaterials under TSCA.** S. Prothero, US EPA, Washington, DC.
- **Potential Regulation of Nanotechnologies under Major Environmental Laws.** J. Pendergrass, Environmental Law Institute, Washington, DC.
- **Applied NanoStructured Solutions, LLC Policy for Environmental, Safety and Health Management of Nanomaterials.** A. Jones, Applied NanoStructured Solutions, LLC, Baltimore, MD.

**CR 303 Dust Explosion Hazard Assessment — Including OSHA’s Combustible Dust National Emphasis Program**

**11:30 a.m.—12:30 p.m. + OCC, Oregon 204**

**Presenter:** V. Ebadat, Chilworth Global, Plainsboro, NJ. **Moderator:** L. Gualandri, INEOS, Houston, TX. **Monitors:** P. Ceo, University of Texas, Houston, TX.

The majority of powders that are used in the processing industries are combustible (also referred to as flammable, explosible). An explosion will occur if the concentration of the combustible dust that is suspended in air is sufficient to propagate flame when ignited by a sufficiently energetic ignition source. This presentation will discuss the conditions that are required for dust cloud explosions to occur and presents a well-tried approach to identify, assess, and eliminate/control dust explosion hazards in facilities.

**Luncheon Discussions**

**Students and Early Career Professionals**

**12:30 p.m.—1:30 p.m. + OCC, Expo, Hall D**

Luncheon Discussions are small, highly interactive group discussions facilitated by members of AIHA’s Students and Early Career Professionals Volunteer Group. Topics address issues of specific interest to young industrial hygienists or to hygienists new to the profession. Purchase lunch and select a discussion — seating is first-come, first-served.

1. **CIH Certification**
   **Facilitators:** N. Greeson, Duke University, Durham, NC; L. O’Donnell, B. Snow, American Board of Industrial Hygiene, Lansing, MI.

2. **How to Break the Ice with Workers to Accomplish IH Tasks**
   **Facilitator:** C. Boraiko, Middle Tennessee State University, Murfreesboro, TN.

3. **Tips and Tricks for Effectively Communicating with Management**
   **Facilitator:** C. Hovde, Caterpillar, Minneapolis, MN.

4. **What is It Like to Manage H&S at Multiple Locations: Travel, Organization and Management Tips You Need to Know for a Multi-site Job**
   **Facilitator:** C. Jerrick, NAIG Safety & Environmental, Plymouth, MN.

5. **What You Always Wanted to Know but Were Afraid to Ask about AIHA Committees: Projects and Activities to Become Involved in the Profession**
   **Facilitator:** L. Vivekanand, Tokyo Electron, Albany, NY.

*Topics subject to change.*
Jeffery S. Lee Lecture

Occupational Exposure Guidelines — Why Process is as Important as Science
1:00 p.m.—2:00 p.m. + OCC, Oregon 202

Lecturer: Lisa M. Brosseau, ScD, CIH, Associate Professor, Division of Environmental Health Sciences, School of Public Health, University of Minnesota, Minneapolis, MN

A process in which bias is balanced and conflict of interest is minimized is the key to a successful scientific decision-making process for developing occupational exposure guidelines. In this lecture, Dr. Brosseau, the current Chair of ACGIH® and former Chair of the Threshold Limit Values for Chemical Substances (TLVs®-CS) Committee, will describe the approach used by ACGIH and its scientific guideline committees to ensure an independently-derived outcome that encompasses a wide range of scientific expertise and provides appropriate opportunities for external input.

CR 304
Using ISO Life Cycle Assessment Standards
2:00 p.m.—3:00 p.m. + OCC, B110


Life cycle assessment (LCA) is a tool for identifying and evaluating the environmental aspects of products and services from “cradle to cradle:” from the extraction of resource inputs to the eventual disposal or, preferably, reuse of the product or its waste. ISO 14040 standards and conduct of LCA studies that provide an organization with information on how to reduce the overall environmental impact of its products and services.

CR 305
Consumer Product Toxicology
2:00 p.m.—3:00 p.m. + OCC, B119

Presenter: T. Uliano, EHS Consultant/Adjunct Instructor, Portland, OR. Moderator: D. Gibbon, Rocky Mountain Power, Salt Lake City, UT. Monitor: E. McClellan, University of Michigan, Ann Arbor, MI.

Average consumers purchase hundreds of products annually and, on any given day, are unsuspectingly exposed to scores of chemicals. Exposure encompasses all routes of entry and the toxicity of these agents is poorly evaluated and not fully understood. Children are especially vulnerable. A few of these agents are persistent in the environment and found in the body tissues of most humans. This presentation will explore the confusing and ubiquitous nature of everyday commercial products.

PO 106
Biosafety and Environmental Microbiology I: Allergens, Fungi, and IEQ: What’s New?
2:00 p.m.—4:20 p.m. + OCC, A106


2:00 p.m.
Quality Control Procedures Using Multiplex Array for Indoor Allergens in an Analytical Laboratory. (PO 106-1)
E. King, B. Smith, S. Filep, D. Block, J. Armstrong, M. Chapman, Indoor Biotechnologies, Charlottesville, VA.

2:20 p.m.

2:40 p.m.
A Field Study on the Growth and Removal of Microorganisms and Allergens on Carpet. (PO 106-3) R. Lewis, K. Ong, B. Emo, J. Kennedy, Saint Louis University, St. Louis, MO; C. Shorter, University of Otago, Wellington South, New Zealand; C. Hide, Hally Group NZ, Christchurch, New Zealand.

3:00 p.m.
Spore Trap Sampling Data Alone Does not Provide Enough Information in Most Investigations to Determine the Allergic Potential of an Indoor Environment. (PO 106-4) R. Billups, Air Allergen & Mold Testing, Inc., Stone Mountain, GA.

3:20 p.m.
Indoor Air Quality in Schools: What is Lurking in Our Classrooms and What is Done to Remediate It? (PO 106-5) B. Cortes, EMSL Analytical Inc., Orlando, FL.

3:40 p.m.
Effects of Flood on Pre-Existing Mold Spores within Drywall Sold by Distributors — Results of a Two-Year Study. (PO 106-6) P. Haas, Morse Zehnter Associates, West Palm Beach, FL.

4:00 p.m.
Eight Proven Steps to Prevent Indoor Environmental Quality Problems. (PO 106-7) M. Matilainen, AMEC Earth and Environmental, Westford, MA.
Defining and Evaluating Data Quality

2:00 p.m.–4:30 p.m. + OCC, B116

**Arrange:** C. Simmons, ENVIRON International Corporation, Chicago, IL.
**Moderator:** J. Rasmussen, Chemistry & Industrial Hygiene, Inc., Wheat Ridge, CO.
**Monitors:** M. Weeks, Medgate Inc., Toronto, ON, Canada; G. Bangs, Bureau Veritas, Seattle, WA.

The quality of exposure data used for risk assessment and risk control is critical to our ability to evaluate, eliminate and control occupational risks. Additionally, retrospective exposure assessments are becoming increasingly important as a source of exposure information in support of governmental health risk assessments, epidemiologic studies, litigation, and REACH-related exposure scenario evaluation. In this roundtable we will define what is meant by “data quality,” present available guidance on evaluation methods for data quality assessment and provide examples conducted by experts. Our ultimate goal is to encourage dialogue on this topic to assist the AIHA® exposure assessment strategies committee in the development of guidance documents and tools for evaluating data quality.

  C. Simmons, ENVIRON International Corporation, Chicago, IL.
- IPCS Data Quality Harmonization Project
  W. Griffith, University of Washington, Seattle, WA.
- Data Quality and Prospective Exposure Assessment
  M. Waters, NIOSH, Cincinnati, OH.
- Data Quality and Retrospective Exposure Assessments
  F. Boelter, ENVIRON International Corporation, Chicago, IL.
- Data Quality in the Courtroom
  P. Hewett, Exposure Assessment Solutions, Inc., Morgantown, WV.

### PO 107
Engineering and Control Technology

2:00 p.m.–4:40 p.m. + OCC, D138

**Arrange and Moderator:** S. Battista, 3M Company, Maplewood, MN.
**Monitors:** S. Durgam, NIOSH, Cincinnati, OH; E. Jones, ExxonMobil, Annandale, NJ.

#### 2:00 p.m.

#### 2:20 p.m.

#### 2:40 p.m.
**Determination of Capture Velocities for Vapors and Gases by Schlieren Photography.** (PO 107-3) S. Wang, C. Chen, Taiwan University, Taipei City, Taiwan; J. Ciou, Institute of Occupational Safety and Health, Taipei County, Taiwan.

#### 3:00 p.m.

#### 3:20 p.m.
**Preliminary Results from Tests on Two Tracer Gas Protocols Developed to Determine Ventilation Flow Rates and Patterns in Naturally Ventilated Munitions Storage Bunkers.** (PO 107-5) R. Rogers, L. Kneten, G. Braybrooke, J. Richardson, U.S. Army, Bel Air, MD; T. Mott, U.S. Army, Fort Lewis, WA.

#### 3:40 p.m.
**Field Effectiveness of Portable HEPA-Equipped Air Filtering Devices (Pilot Study).** (PO 107-6) D. Walsh, Walsh Certified Consultants, Inc., Las Vegas, NV.

#### 4:00 p.m.
**Quantitative Assessment on the Effectiveness of Different Exposure Control Strategies for Hexavalent Chromium Mitigation in Stainless Steel Welding.** (PO 107-7) S. Caporali-Filho, R. Aviles, University of Puerto Rico, San Juan, PR.

#### 4:20 p.m.
PO 109
Risk Assessment Case Studies

2:00 p.m.–5:00 p.m. + OCC, D136

2:00 p.m.
Assessing the Risk to Firefighters from Chemical Vapors and Gases during Vehicle Fire Suppression. (PO 109-1) K. Fent, NIOSH, Cincinnati, OH.

2:20 p.m.

2:40 p.m.

3:00 p.m.

3:20 p.m.

3:40 p.m.

4:00 p.m.
PCB-Caulk Removal Project at JSC Houston, Texas. (PO 109-7) W. Young, W. Molenda, CSC–Applied Technology Group, Houston, TX; P. Stanch, NASA, Houston, TX.

4:20 p.m.

4:40 p.m.

PO 110
Management and Training Issues: Communication

2:00 p.m.–5:00 p.m. + OCC, A108

2:00 p.m.
The Impact of HAZWOPER Training on Workplace Knowledge, Skills and Behavior. (PO 110-1) B. Alexander, C. Rice, University of Cincinnati, Cincinnati, OH.

2:20 p.m.

2:40 p.m.
GHS SDS: It’s More Than Just Dropping the ‘M’. (PO 110-3) J. Dipper, J. Chappel, CCOHS, Hamilton, ON, Canada.

3:00 p.m.
Developing a Culture with a Foundation of Recognition. (PO 110-4) T. Efird, Caterpillar Safety Services, Portland, OR.

3:20 p.m.

3:40 p.m.
Eliminating Preventable Vehicle Incidents through a Process of Employee Involvement. (PO 110-6) T. Efird, Caterpillar Safety Services, Portland, OR.

4:00 p.m.
Using ANSI Z10 as a Program Assessment Tool. (PO 110-7) A. Sheaffer, J. Yatalonis, LMI, Belcamp, MD.

4:20 p.m.

4:40 p.m.

RT 208
Building a Green Laboratory in the 21st Century

2:00 p.m.–5:00 p.m. + OCC, C121
Arranger: L. Poore, University of Kentucky, Lexington, KY. Moderator: M. Russell, AECOM, Middleton, WI. Monitors: L. Poore, University of Kentucky, Lexington, KY; L. Wong, University of California, San Francisco, San Francisco, CA.

Several systems now exist to facilitate the development of ‘green’ laboratories. The LEED (Leadership through Environmental and Engineering Design) system developed by the U.S. Green Building Council is one of the more established and widely recognized systems. However, the Green Globes program established by the Green Building Initiative (GBI) is another more recent system that has been created in conjunction with ANSI (American National Standards Institute) that may be more user friendly and less expensive. Then there is the Lab21 program, EPA’s Energy Star program, and a host of other systems. How should a company/institution decide what guidance to follow? What is the role of the industrial hygienist in promoting laboratory sustainability? This session will explore these topics and include specific examples of projects employing green methodologies.
+ Design Considerations for a LEED Gold-Certified Research Laboratory. K. Musser, CMTA Engineers, Lexington, KY.
+ Green Globes Certification and Its Application to Green Laboratory Design. S. Rekow, GBH, Portland, OR.
+ Perspectives on Green Laboratories. S. Lengerich, Eli Lilly and Company, Indianapolis, IN.

RT 209
Environmental Noise: 35 Years and Counting — Implications for Industrial Hygiene
2:00 p.m.–5:00 p.m. + OCC, F152

For the industrial hygienist, noise challenges don't stop at the walls of the facility or even at the property line. Frequently, since the industrial hygienist has the sampling technique skills to apply and the knowledge of noise and its measurement they are called on to deal with property line complaints from neighbors and with planning responsibilities when facilities expand or build new locations. It has been 35 years since the EPA issued its initial call for quiet communities. Issues include vague localized regulations, measurement parameters and techniques different from worker exposure assessment, control approaches, and unique noise sources. This presentation takes a look back and provides a variety of perspectives looking forward to equip the industrial hygienist to manage environmental noise issues.

+ A Historical Perspective and a Future Vision on Environmental Noise Regulation. L. Bloomberg, Noise Pollution Clearing House, Montpelier, VT.
+ Unique Measurement Challenges for Environmental Noise. J. Banach, 3M Company, Oconomowoc, WI.
+ Predicting DNL from Population Density and Annoyance from DNL. P. Schomer, Schomer and Associates, Champaign, IL.
+ Perspectives in Running a Noise Control Program and an Overview of International Standards. P. VanOrden, City of Portland, Portland, OR.

RT 210
Living with Differences: Addressing Standards for Respirator Selection/Use Worldwide
2:00 p.m.–5:00 p.m. + OCC, F149

Organizations with global operations face a significant issue when addressing differences that exist between regional standards for selection and use of respiratory protective equipment. Exactly the same equipment can have different assigned protection factors or limitations for use depending on the country or region of use, and management of its deployment is consequently complicated. This roundtable presents current experiences from major corporations, compares standards and needs across the world, discusses ISO standard implementation and proposes strategies for respiratory protective equipment deployment by multinational organizations.

+ Applying Global Occupational Hygiene Practices Across Multiple Jurisdictions. J. Smith, ExxonMobil Corporation, Houston, TX.
+ A Corporate-Wide Occupation Hygiene Management System. M. Murphy, 3M Company, St. Paul, MN.
+ Standards in North America — Application and Future Change. J. Steelnack, OSHA, Washington, DC.

RT 211
2:00 p.m.–6:00 p.m. + OCC, Oregon 201
Arranger: C. Cee, OSHA, Atlanta, GA. Moderator: R. Fairfax, OSHA, Washington, DC. Monitors: C. Cee, OSHA, Atlanta, GA; C. Payne, OSHA, Jackson, MO.

The forum is in honor of the former OSHA Region VI Deputy Regional Administrator who died suddenly at the age of 49 in September 1997. He was a leader in the field of industrial hygiene, as well as for OSHA. The goal of the forum is to raise awareness about the role of the regulator in addressing workplace health hazards, to illustrate real-life workplace scenarios, and to show the application and effectiveness of the control methods and solutions. Cases with high exposure levels at the initiation of the OSHA visit, and results that demonstrate reduction in or elimination of the hazard. Attendees will gain practical information regarding exposure assessment and control and learn more about OSHA’s approach to workplace health issues. The forum will be interactive, with attendees having the opportunity to ask questions of the panel as the presentations are made.

+ Tetrachloroethylene Overexposure in the Automotive Stamping Industry. F. Strelec, OSHA, North Syracuse, NY.
+ Acute Exposures to Parathion in an Underground Powder Transfer. J. Sternes, OSHA, Peoria, IL.
+ Health Hazards Associated with “Ice Blasting” in Confined Spaces. D. DeWees, OSHA, Concord, NH.
+ Methyl Ether Toxicity during a Rail Car Entry at a Biodiesel Fuel Facility. J. Vicory, OSHA, Kansas City, MO.
+ Lead Overexposure in the Manufacture of Diving Weights. S. Kapitzke, OSHA, Jacksonville, FL.
+ Diacetyl Exposure at a Food Flavoring Manufacturing Operation. K. Lee, OSHA, Milwaukee, WI.
+ Explosive Water in a Municipal Water Storage Tank. M. Jarvis, OSHA, Austin, TX.
### RT 212
**Nanotechnology: Advances in Medical Surveillance and Occupational Health**

*2:00 p.m.–6:00 p.m. + OCC, Oregon 203*

**Arranger:** D. Ewert, OSO BioPharmaceuticals Manufacturing, LLC, Albuquerque, NM.

**Moderator:** M. Hoover, NIOSH, Morgantown, WV.

**Monitors:** M. Rosenow, Argonne National Laboratory, Argonne, IL.; R. Lally, University of California Irvine, Irvine, CA.

Inherent problems with nanotechnology and engineered nanomaterials are the uncertainties associated with health effects and the need to develop robust medical management systems. This session, and an associated panel discussion, will address world approaches to cataloging worker health and medical surveillance. Currently, there are a number of organizations promoting occupational health registries and enhanced medical management. By strategically streamlining the data collection process and management of care, organizations with engineered nanoparticle exposures can become key participants to this community of practice. To facilitate this goal, the roundtable brings together a number of recognized experts from toxicology, medicine and industrial hygiene to discuss these topics as well as many others. Attendees will not only gain the opportunity to learn from current approaches but acquire the tools necessary to develop their own. In addition to guidance in fundamentals, this session provides participants with an update on Medical Surveillance, Exposure Registries, Epidemiologic Research and innovative methods for conducting toxicology studies.

#### Medical Surveillance for Nanotechnology Workers

- D. Trout, NIOSH, Cincinnati, OH.
- A Critical View of Medical Surveillance for Nanomaterial Workers
  - M. Fischman, Intel Corporation, Walnut Creek, CA.
- Occupational Health Strategies for Workplace Exposure to Nanomaterials
  - M. Kosnett, University of Colorado, Denver, CO.

#### The Occupational Medicine — Industrial Hygiene Interface in DOE Facilities

- B. Stockmeier, Argonne National Laboratory, Argonne, IL.

#### Nanotechnology: New Nanoscale Tools for Assessing Toxicity of Nanoscale and Macroscale Products

- J. Hussey, Nanolink, Inc., Skokie, IL.
- Managing Worker Medical Information: A Panel Discussion
  - D. Ewert, OSO BioPharmaceuticals Manufacturing, Albuquerque, NM.

### RT 213
**Occupational Exposure Limits: Global and Domestic Perspectives from Across the Field**

*2:00 p.m.–6:00 p.m. + OCC, Oregon 204*

**Arranger and Moderator:** A. Weinrich, US EPA, Cincinnati, OH.

**Monitors:** S. Musson, US EPA, Cincinnati, OH; K. Still, Occupational Toxicology Associates, Hillsboro, OR.

This roundtable brings together science leaders from ten international and US government and private sector organizations that derive and apply occupational exposure limits (OELs). These leaders will present and discuss various aspects of the principles and science used in setting occupational exposure limits. The roundtable will emphasize scientific methods, both conceptual and general, and include evolutions in processes for defining and setting OELs as new methods and operating procedures are introduced. However, policy implications of such scientific decisions also will be considered.

#### Science-Based, Economics-Based, or Baseless: When Will We Set Risk-Based OELs?


#### The OSHA Permissible Exposure Limits

- N. Hauter, OSHA, Washington, DC.

#### The ASTM E34 Voluntary Consensus Standards Process for Developing OELs

- T. Slavin, Navistar Inc., Chicago, IL.

#### Environmental and Occupational Exposure Limits for PAHs in China

- X. Duan, Chinese Research Academy of Environmental Sciences, Beijing, China.

#### WITHDRAWN The MAK Approach for Setting OELs in Germany

- A. Hartwig, Karlsruhe Institute of Technology, Karlsruhe, Germany.

#### NIOSH Contributions to OEL Development

- P. Schulte, NIOSH, Cincinnati, OH.

### RT 214
**OSHA’s Injury and Illness Prevention Program Rulemaking**

*2:00 p.m.–6:00 p.m. + OCC, B113*

**Arranger:** C. Redlinger, Redinger EHS, Inc., Harvard, MA.

**Moderator:** D. Dougherty, Gunderson Lutheran Medical Center, Viroqua, WI.

**Monitors:** B. Perry, OSHA, Washington, DC; L. Iverson-Leirmo, Gunderson Lutheran Medical Center, Viroqua, WI.

OSHA is developing a standard that will require employers to establish and maintain an Injury and Illness Prevention Program (I2P2). It involves identifying and controlling hazards as well as planning, implementing, evaluating, and improving processes and activities that protect employee safety and health. OSHA has substantial data on reductions in injuries and illnesses from employers who have implemented similar effective processes. Currently, 12 states, including California, Oregon and Washington have related rules. The preliminary draft I2P2 rule builds on these guidelines and on lessons learned from successful approaches and best practices under OSHA’s Voluntary Protection Program, Safety and Health Achievement Recognition Program and similar industry and international initiatives such as ANSI/AIHA Z10 and OHSAs 18001. Roundtable speakers will present details about the proposed rule, empirical research on systematic approaches to worker safety and health, along with case examples and best practices. The AIHA’s I2P2 Task Force recommendations and outreach efforts to support the proposed rule will be presented.

#### Injury and Illness Prevention Programs: An OSHA Overview

- M. Seymour, OSHA, Washington, DC.
Technical Program: Monday

What Do Workers Need for an Injury and Illness Prevention Program to Be Effective?
B. Kojola, AFL-CIO, Washington, DC.

C. Redinger, Redinger EHS, Inc., Harvard, MA.

Traditional Mismanagement Systems Don’t Work.
J. Howe, ANSI/AIHA Z10 Chair, Medford, OR.

Experience with Existing State Programs: What Have We Learned?
J. Mendeloff, RAND Center - CHSW, Pittsburgh, PA.

A Model of Safety and Health Program Excellence that Works.
R. Layne, VPPPA, Falls Church, VA.

Making the Case for I2P2 in Small Workplaces and Implementation Best Practices.
G. Miller, MM&A LLC, Matthews, NC.

Science Symposium: Inhalable Particles — The State of the Science on a Big Particle Problem
2:30 p.m.–5:30 p.m. + OCC, Oregon 202


The Science of Inhalable Particles.
J. Volekens, Colorado State University, Fort Collins, CO.

How Well Do Personal Aerosol Samplers Meet the Inhalable Sampling Convention?
D. Sleeth, University of Utah, Salt Lake City, UT.

Exposure Reconstruction: How to Relate Total and Inhalable Dust Exposures.
R. Anthony, University of Iowa, Iowa City, IA.

What to Expect in Inhalable Exposure Limit Development.
L. Brosseau, University of Minnesota, Minneapolis, MN.

So, You Decided to Adopt Inhalable Samplers: Lessons Learned from the Field.
M. Harper, NIOSH, Morgantown, WV.

Particle Inhalability: The Road Ahead.
J. Volekens, Colorado State University, Fort Collins, CO.

Emergency Management and EHS: We’ve Come a Long Way in 10 Years
3:30 p.m.–4:30 p.m. + OCC, B110

Presenter: E. Clas, Clas Consulting LLC, Norfolk, MA. Moderator: M. Heaney, ohsm, LLC., Louisville, CO. Monitor: K. Tonn, University of Illinois, Chicago, IL.

Emergency response and recovery has come a very long way in 10 years! Ms. Clas has been at each of the three largest disasters during that time and will discuss her impressions of where we have matured as safety and health professionals over that period. Topics will include the use of the incident command system, national response framework, safety and health annex.

Overview of Recent Substantive Federal Environmental, Health, and Safety Rulemaking
3:30 p.m.–4:30 p.m. + OCC, B119

Presenter: G. Tichenor, Stoel Rives LLP, Portland, OR.

This presentation reviews federal environmental, health, and safety (EH&S) rulemakings in the last year. As EH&S professionals we need to be up-to-date with changes to the federal regulations. This presentation looks at rulemakings with a broad scope of application, applying across industries and sectors, rather than looking at rules that may apply only to certain interests. This presentation will help attendees “catch up” with what has been going on in federal rulemaking over the last 12 months.

Due to circumstances beyond our control, AIHce cannot guarantee the appearance of all presenters listed in this program. Registration fees will not be refunded due to speaker changes; we regret any disappointment.

Celebrate the 40th Anniversary of the OSH Act
Special recognition at the Wednesday General Session
OSHA and NIOSH staff requested to attend.
THE COMPLETE CHEMICALS MANAGEMENT SYSTEM

**MSDS MANAGEMENT:** Our Repository contains more than 13 million MSDS
Thousands added and updated daily

**TRACKING:** Locate chemicals in stores world-wide
Identify Local Regulations; Produce country-specific reports (TIER II etc)

**RISK ASSESSMENT:** Control Banding produces compliant analyses of task-specific uses

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**Tuesday, May 17**

<table>
<thead>
<tr>
<th>Time</th>
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| 6:30 a.m.-8:00 a.m. | AIHF Fun Run/Walk  
Ankeny Pavilion, Waterfront |
| 7:00 a.m.-5:30 p.m. | Registration and Hotel Reservations  
OCC, Lobby A |
| 7:30 a.m.-5:00 p.m. | Press Room  
OCC, D132 |
| 7:30 a.m.-5:30 p.m. | Volunteer Collaboration Café  
OCC, Lobby C |
| 7:30 a.m.-5:30 p.m. | Speaker Ready Room  
OCC, C124 |
| 8:00 a.m.-9:00 a.m. | General Session: Green Chemistry: A Strategic Opportunity for Industrial Hygiene  
Michael P. Wilson, PhD, MPH, Berkeley Center for Green Chemistry, University of California, Berkeley, CA.  
OCC, Portland Ballroom |
| 8:00 a.m.-4:00 p.m. | AIHA CareerAdvantage Development Fair  
2011  
OCC, Hall A |
| 9:00 a.m.-Noon | ST-03 City Art Trek  
Walk starts at the Hilton; meet at 9:00 a.m. in the Main Lobby, 6th St.  
WD 501 2nd International Symposium on Wood Dust: Health Effects and Exposure Studies  
OCC, A108 |
| 9:00 a.m.-3:00 p.m. | Visit the Expo!  
OCC, Halls B-E  
**Daily Prizes, Special Displays, Cyber/Message Centers, Restaurants, Lounges, Expo Theater**  
No sessions 9:00 a.m.-10:30 a.m. and 12:30 p.m.-2:00 p.m.  
WD 504 2nd International Symposium on Wood Dust: Wood Dust Poster Session  
OCC, Hall B |
| 9:00 a.m.-3:00 p.m. | Poster Sessions  
OCC, Hall B  
**Poster Session 403**  
Authors present 10:00 a.m.-Noon  
**Poster Session 404**  
Authors present 1:00 p.m.-3:00 p.m. |
| 9:30 a.m.-1:00 p.m. | TT-03 East Side Plating, Inc.  
OCC, Bus departs MLK entrance; board by 9:15 a.m.  
Poster Session 403  
Authors present 10:00 a.m.-Noon  
**Poster Session 404**  
Authors present 1:00 p.m.-3:00 p.m. |
| 9:30 a.m.-2:00 p.m. | Exhibitor Product Demos and Presentations  
Expo Theater, Hall D  
See presentation descriptions on pages 52 and 59. |
| 10:30 a.m.-11:30 a.m. | Upton Sinclair Memorial Lecture for Outstanding EHS Investigative Reporting  
OCC, Oregon 202  
CR 308 Hazardous Materials Shipping and Transportation  
OCC, B110  
CR 309 Safety Culture: Motivation and Influence  
OCC, D138 |
| 10:30 a.m.-12:30 p.m. | PO 111 Field Detection, Sampling and Analysis: Real-Time Detection Systems  
OCC, A106  
PO 112 Healthcare Industries I: Exposure Assessment and Control  
OCC, F149  
PO 113 Risk Management Planning and Prevention  
OCC, D136  
RT 215 Ask the Expert: An Update on the NIOSH Nanotechnology Research Program  
OCC, Oregon 204 |
| 10:30 a.m.-12:50 p.m. | PO 114 Personal Protective Clothing and Equipment  
OCC, Oregon 203  
PO 115 Computer Applications  
OCC, C121  
RT 220 Perspectives on Preparation for the CIH Exam--Version 5.0  
OCC, D139  
11:00 a.m.-Noon  
The Exposome: The Future of Exposure Science?  
OCC, C126  
11:30 a.m.-12:30 p.m. | CR 310 OSHA Construction and General Industry Standards: Why You Need to Understand Both  
OCC, B119 |
| Noon-1:00 p.m. | WD 504 2nd International Symposium on Wood Dust: Wood Dust Poster Session  
OCC, Hall B |
| 12:30 p.m.-1:30 p.m. | Luncheon Discussions: NIOSH Table Talks  
OCC, Expo, Hall D  
William P. Yant Award Lecture  
OCC, Oregon 202 |
| 12:30 p.m.-2:00 p.m. | Unsolved IH Mysteries Workshop  
OCC, D133 |
| 12:30 p.m.-5:30 p.m. | ST-04 “DeVine” Wines  
Depart the OCC MLK Lobby at 12:15 p.m. and the Hilton, 6th St., at 12:30 p.m.  
ST-05 By Gorge!  
Depart the Hilton, 6th St., at 12:45 p.m. and the OCC MLK Lobby at 1:00 p.m. |
| 1:00 p.m.-5:00 p.m. | RT 216 Federal Environmental Lead Programs Update  
OCC, B113  
RT 217 Integrating Safety and Health into Green Construction: From Concept to Case Study  
OCC, F152  
RT 218 Managing Radiation Surprises and a Memorial Tribute to Dr. Herman Cember  
OCC, B116 |
| 1:30 p.m.-5:30 p.m. | TT-04 Intel Corporation  
OCC, Bus departs MLK entrance; board by 1:15 p.m.  
CR 311 Culture and Exposure Control  
OCC, D139 |
| 2:00 p.m.-3:00 p.m. | CR 310 OSHA Construction and General Industry Standards: Why You Need to Understand Both  
OCC, B119 |
| 10:30 a.m.-12:50 p.m. | PO 114 Personal Protective Clothing and Equipment  
OCC, Oregon 203  
PO 115 Computer Applications  
OCC, C121  
RT 220 Perspectives on Preparation for the CIH Exam--Version 5.0  
OCC, D139  
11:00 a.m.-Noon  
The Exposome: The Future of Exposure Science?  
OCC, C126  
11:30 a.m.-12:30 p.m. | CR 310 OSHA Construction and General Industry Standards: Why You Need to Understand Both  
OCC, B119 |
| 12:30 p.m.-1:30 p.m. | Luncheon Discussions: NIOSH Table Talks  
OCC, Expo, Hall D  
William P. Yant Award Lecture  
OCC, Oregon 202 |
| 12:30 p.m.-2:00 p.m. | Unsolved IH Mysteries Workshop  
OCC, D133 |
| 12:30 p.m.-5:30 p.m. | ST-04 “DeVine” Wines  
Depart the OCC MLK Lobby at 12:15 p.m. and the Hilton, 6th St., at 12:30 p.m.  
ST-05 By Gorge!  
Depart the Hilton, 6th St., at 12:45 p.m. and the OCC MLK Lobby at 1:00 p.m. |
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OCC, B119 |
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OCC, Oregon 203  
PO 115 Computer Applications  
OCC, C121  
RT 220 Perspectives on Preparation for the CIH Exam--Version 5.0  
OCC, D139  
11:00 a.m.-Noon  
The Exposome: The Future of Exposure Science?  
OCC, C126  
11:30 a.m.-12:30 p.m. | CR 310 OSHA Construction and General Industry Standards: Why You Need to Understand Both  
OCC, B119 |
2:00 p.m.-4:30 p.m.
CR 312 Lessons Learned from Teaching Lead RRP, and an Update on EPA’s Rule
OCC, D138

RT 221 Addressing the Hazards of New and Emerging Issues within the Workplace
OCC, Oregon 202

RT 222 Fit-Testing Hearing Protection Devices: Technology, Application, and Implementation
OCC, B113

RT 223 Healthcare Construction: Moving Forward
OCC, B119

RT 224 International Ergonomic Analysis Tools and Standards: Beyond Our Borders
OCC, F152

RT 225 NFPA 70E — Understanding Requirements, Relationships and Responsibilities
OCC, A106

SS 002 Science Symposium: Emerging Exposure Assessment Methods for Occupational Epidemiology Studies
OCC, F149

2:00 p.m.-5:00 p.m.
PO 116 Respiratory Protection I
OCC, C121

RT 226 Green Chemistry: Opportunities for the Industrial Hygienist
OCC, Oregon 204

2:00 p.m.-5:20 p.m.
PO 117 Indoor Environmental Quality I
OCC, D136

2:00 p.m.-6:00 p.m.
PO 118 Industrial Hygiene General Practice
OCC, B110

RT 227 Integrated Solutions in Sustainable Occupational Health and Safety Management Systems
OCC, B116

RT 228 NIOSH Health Hazard Evaluations: Results of Recent Industrial Hygiene Evaluations
OCC, Oregon 203

RT 229 OSHA’s Response to the Deepwater Horizon Oil Spill
OCC, Oregon 201

2:30 p.m.-3:00 p.m.
AIHA Government Affairs Update
OCC, D133

3:30 p.m.-4:30 p.m.
CR 313 TSCA Regulatory Compliance: Challenges and Solutions
OCC, D139

AIHA*
8:00 a.m.-11:00 a.m.
ANSI/AIHA Z9.12 Subcommittee Meeting
OCC, D131

8:30 a.m.-9:30 a.m.
Exposure Assessment Committee Roundtable Meeting
OCC, E145

9:00 a.m.-10:00 a.m.
Dermal Project Team Meeting
OCC, E148

9:30 a.m.-11:30 a.m.
Engineering Committee Meeting
OCC, E143

Environmental Issues Committee Meeting,
OCC, E142

Exposure Assessment Strategies Committee Meeting
OCC, E145

Management Committee Meeting
OCC, E141

Publications Committee Meeting
OCC, E144

10:00 a.m.-Noon
Practice, Standards and Guidelines Committee Meeting
OCC, E147

Noon-1:00 p.m.
Blue Council Meeting
OCC, E144

Green Council Meeting
OCC, E142

Indigo Council Meeting
OCC, E148

1:00 p.m.-3:00 p.m.
Aerosol Technology Committee Meeting
OCC, E143

Communication and Training Methods Committee Meeting
OCC, E141

Engineering Industry SIG Meeting
OCC, E147

AIHF
3:30 p.m.-5:30 p.m.
AIHF Board of Trustees Meeting
Hilton, Council Suite

JOEH
4:00 p.m.-6:00 p.m.
JOEH LLC Board Meeting
Hilton, Cabinet Suite
Ancillary
6:30 a.m.-8:00 a.m.
Lockheed Martin Industrial Hygiene Breakfast
    Doubletree, Halsey
1:30 p.m.-5:30 p.m.
12th Annual DoD Industrial Hygiene Forum
    Doubletree, Helens
2:00 p.m.-3:30 p.m.
OSHA Compliance Officers' Forum on Field Equipment Evaluation sponsored by OSHA
    Cincinnati Technical Center
3:00 p.m.-5:00 p.m.
CRBOH AGM / Reception
    Hilton, Broadway III
3:00 p.m.-6:00 p.m.
University of Cincinnati-Academy of Kettering Fellows
    Hilton, Galleria South
4:00 p.m.-6:00 p.m.
University of Central Missouri Alumni and Friends
    Hilton, Pavilion Ballroom East
4:30 p.m.-6:30 p.m.
University of Michigan Reception
    Hilton, Directors Suite
4:45 p.m.-6:15 p.m.
University of Arizona Alumni Reception
    Monaco, Red Star Club Room
5:00 p.m.-6:30 p.m.
University of Washington Alumni and Friends Reception
    Hilton, Pavilion Ballroom West
5:30 p.m.-7:30 p.m.
University of Minnesota School of Public Health's Industrial Hygiene Reunion
    Jupiter Hotel, DreamBOX Room, 800 E. Burnside, Portland
7:00 p.m.-8:15 p.m.
Purdue University Alumni Reception
    Hilton, Studio Suite
7:00 p.m.-10:00 p.m.
ICU-A Total Safety Company Reception
    Hilton, Broadway
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How green chemistry provides a long-term approach to scientific, technical and public policy challenges; AIChE 2011

The industrial hygiene role in helping business understand green chemistry’s potential for reducing or eliminating worker exposures, improving product stewardship and innovation, and accelerating competitive advantage.

Dr. Michael Wilson defines the cutting-edge of the emerging field called green chemistry. The principles of green chemistry include the need to design safer chemicals and products. This benign-by-design approach incorporates consideration of chemicals’ effects on public health and the environment.

Dr. Wilson has advanced the work of green chemistry and chemicals policy at state and national levels. The author of numerous published articles in scientific, technical and public policy journals, Dr. Wilson has also testified before the United States Senate Committee on Environment and Public Works.

Among a number of topics, Dr. Wilson will discuss:
+ How green chemistry provides a long-term approach to reducing environmental damage and worker exposure to hazardous chemicals at the earliest stage of development;
+ Scientific, technical and public policy challenges;
+ The industrial hygiene role in helping business understand green chemistry’s potential for reducing or eliminating worker exposures, improving product stewardship and innovation, and accelerating competitive advantage.

Immediately following his presentation, Dr. Wilson will host a 20 minute Q&A session. Attendees who stay will be asked to move to the front. Dr. Wilson will also participate in roundtables 219 and 226.

This general session is sponsored by

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**GENERAL SESSION**

8:00 a.m.–9:00 a.m.
OCC, Portland Ballroom

Green Chemistry: A Strategic Opportunity for Industrial Hygiene

Michael P. Wilson, PhD, MPH
Associate Director for Integrative Sciences
Berkeley Center for Green Chemistry, University of California
Berkeley, CA

Seventy-four billion pounds of industrial chemicals enter the United States daily. Many are toxic, and most will survive long-term to impact life on earth. Global chemical production will double in the next 24 years.

Dr. Michael Wilson defines the cutting-edge of the emerging field called green chemistry. The principles of green chemistry include the need to design safer chemicals and products. This benign-by-design approach incorporates consideration of chemicals’ effects on public health and the environment.

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**Exhibitor Product Demos and Presentations**

9:30 a.m.–1:00 p.m. + Expo Theater, Hall D

9:30 a.m.
Creating a Calibrated Exposure Chamber to Verify the Performance of Air Samplers and Respirator Cartridges, Assay Technology Inc./AT Labs/Miller Nelson (MNR)

The new Miller-Nelson HCS-501 Atmosphere Generator emits a flowing atmosphere at a controlled flow rate, temperature and humidity into which pure solvents or gases may be infused at a controlled rate, using a volumetric syringe or mass flow controllers. The kinetic atmosphere thus created passes through a rectangular acrylic box filter with Reference Samplers and Test Samplers. Test Samplers or Respirators may be evaluated by comparison to the Reference Samplers according to tried-and-true statistical methods. Respirators must be evaluated by comparison to the NIOSH SOPs and other testing protocols.

10:00 a.m.
New Products Developments in XRF Analysis, Thermo Scientific — Air Quality Instruments and Niton Analyzers

The new Thermo Scientific Niton FXL field X-ray lab is a new solution for an observed field analysis need, providing higher analytical capability in a convenient package. Many users of hand-held XRF instruments can be observed exclusively using them in test stands. The Niton FXL was developed for this audience’s need for portable analysis at a fixed location. We will display this instrument analyzing environmental samples and educate on the technical capabilities of XRF technology.

Noon
Explosion Proof/Dust Ignition Proof Vacuum Cleaner System, Tiger-Vac Inc. USA

EXPI- 35 L DT MRP HEPA – Legally certified explosion proof/dust ignition proof vacuum cleaner with cyclonic vacuuming. Less than 10 ohms resistivity. No cloth filters to wash, it contains a 40-square-foot conductive spun bond polyester filter cartridge with PTFE membrane with a 99.95% efficiency on .5 micron. Its unique manual reverse purge system easily dislodges particles that cling to the filter media by simply opening the purge valve to allow ambient air to flow inside the filter media and blast off even hygroscopic particles. HEPA/ULPA filtration, 99.999% on .12 micron efficiency. The 9-gallon detachable recovery tank includes a conductive poly liner for the safe and easy disposal of recovered materials.

12:30 p.m.
EVA — The Latest in Powered Air-Purifying Respirator Technology, Bullard

Greg Steller, National Accounts Manager, will discuss Bullard’s EVA PAPR system and demonstrate the latest technology available in the respiratory protection market. The EVA PAPR incorporates many features customers have asked for and has set Bullard apart as an industry leader. Lithium ion batteries, a visible fuel gauge, low flow and low battery alarm, as well as a two-speed blower are just some of the advantages provided by this unique product. Bullard also offers a wide variety of head tops.

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**Showtime 7:45 a.m. — Boka Boys**

Blending baritone, tenor, and soprano marimbas, Boka Boys are a high-energy, African style band with a unique, irresistible sound. Start your morning with their upbeat, danceable, fun-to-watch music!
The 1st International Congress on Wood Dust: Challenges for Occupational Risk Assessment and Management was held in 2006 at the Palais des Congrès in Strasbourg, France. The goal of the 2nd International Symposium is to bring together researchers, industrial hygienists, practitioners of occupational medicine, toxicologists, and government officials to discuss the latest developments in particle characterization, sampling and analysis, exposure assessment, human health effects, toxicology and biological mechanisms, epidemiology and risk assessment, and risk management controls.

Wood Dust is implicated in an increased prevalence of certain workplace respiratory symptoms and diseases. However, the action mechanism of wood dust at the molecular, cellular or tissue level to produce these symptoms and diseases is not well understood. Recent estimates in 25 countries suggest 3.6 million workers are exposed to wood dust, with one-third employed in construction carpentry. In France, Decree No. 2003-1254 set an inhalable limit for wood dust in workplaces at 1 mg/m³ coming into force in 2005.

Also in 2005, ACGIH® confirmed the same value as their threshold limit value (TLV) for wood dust, and the NIOSH Recommended Exposure Limit (REL) is also 1 mg/m³. Sixty-two percent (62%) of the estimated total of exposed workers (2.2 million) in Europe are thought to be exposed above this value. Both the numbers of workers exposed and the exposure levels are considered to be similar in North America. It is estimated in Europe that 79% of the exposed construction workers which represent 9% of all construction workers, are exposed daily to more than 1 mg/m³ of inhalable wood dust.

Tuesday, May 17

**WD 501**

**Health Effects and Exposure Studies**

**9:00 a.m.–Noon + OCC A108**

**Arrangers and Moderators:** M. Harper, NIOSH, Morgantown, WV; P. Görner, INRS, Vandoeuvre, France. **Monitor:** S. Kim, NIOSH, Morgantown, WV.

**9:20 a.m.**

Estimation of Wood Dust Exposure in Small and Medium-Sized Companies in Germany. (WD 501-1) J. Schulze, Berufsgenossenschaft Holz und Metall, Bielefeld, Germany.

**9:40 a.m.**

Longitudinal Investigation of Respiratory Health of Workers Exposed to Components of Industrial Wood Processing Dust. (WD 501-2) R. Rando, L. Freyder, J. Lafonte, R. Jones, H. Glindmeyer, Tulane University, New Orleans, LA.

**10:00 a.m.**

Cross-shift Airway Responses and Long-term Decline in FEV1 Among Wood Dust Exposed Workers. (WD 501-3) G. Jacobsen, Herning Hospital, Herning, Denmark; T. Sigsgaard, V. Schlüssen, Aarhus University, Aarhus, Denmark; I. Schaumburg, Aarhus University Hospital, Aarhus, Denmark.

**10:40 a.m.**

Cross Shift Lung Function Among Operators in Wood Pellets Production. (WD 501-4) E. Andersson, Sahlgrenska University Hospital, Gothenburg, Sweden; H. Arvidsson, I. Byrgelell, K. Hagström, Örebro University Hospital, Örebro, Sweden; K. Eriksson, University Hospital of Umeå, Umeå, Sweden.

**11:00 a.m.**


**11:20 a.m.**

Ige-mediated Sensitisation to Pine and Beech Wood Dust in Relation to Dust Exposure Levels and Respiratory Symptoms—The Impact of Cross-reactive Carbohydrate Determinants (CODs). (WD 501-6) V. Schlüssen, G. Jacobsen, T. Sigsgaard, Aarhus University, Aarhus, Denmark; S. Kespohl, M. Raufi-Heimsoth, S. Meurer, U. Meurer, T. Brüning, Institute of the Ruhr University Bochum, Bochum, Germany; I. Schaumburg, Aarhus University Hospital, Aarhus, Denmark.

**11:40 a.m.**

Work-Related Asthma due to Wood Dust — California 1993-Present. (WD 501-7) J. Weinberg, E. Martysch, C. Espinet, California Department of Public Health/Public Health Institute, Richmond, CA; J. Flattery, R. Harrison, California Department of Public Health, Richmond, CA.

**2:00 p.m.**

Airway Reactivity and Health-related Quality of Life in Western Red Cedar Asthmatics Removed From Exposure. (WD 502-1) J. He, M. Chan-Yeung, C. Carlsten, University of British Columbia, Vancouver, BC, Canada.

**2:20 p.m.** WITHDRAWN

**2:40 p.m.**


**3:00 p.m.**

IARC’s Most Recent Evaluation of Wood Dust. (WD 502-4) P. Demers, Occupational Cancer Research Centre, Cancer Care Ontario, Toronto, ON, Canada.

**3:40 p.m.**

Risk Assessment for Occupational Wood Dust Exposure: Evaluation by the Scientific Committee for Occupational Exposure Limits (SCOEL) of the European Union. (WD 502-5) H. Bolt, Leibniz Research Centre for Working Environment and Human Factors (IfADo), Dortmund, Germany.

**4:00 p.m.**

The ACGIH Threshold Limit Value for Wood Dust. (WD 502-6) L. Brousseau, University of Minnesota, Minneapolis, MN.

**4:20 p.m.**

The Cal/OSHA PEL for Wood Dust and How It May Change. (WD 502-7) S. Smith, OSHA, Sacramento, CA.

**4:40 p.m.**


**Program continues on Wednesday, May 18. See page 69 for details.**

**Symposium Co-Chairs:**

+ Dr. Martin Harper, CIH, NIOSH
+ Dr. Peter Görner, INRS (France)

**Symposium Sponsors**

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May 14-19 Portland, OR aihce2011.org
11th Annual Upton Sinclair Memorial Lecture for Outstanding EHS Investigative Reporting  
"Why Should I Care?" Humanizing Worker Safety in the Media  
10:30 a.m.–11:30 a.m. + OCC, Oregon 202  
Lecturer: Jim Morris, Center for Public Integrity, Washington, DC.  

While occupational safety and health professionals know firsthand the devastating toll taken by traumatic injuries and chronic diseases in the workplace, making readers of the mainstream media — and editors — care can be a challenge. A useful journalistic technique is to tell individual workers’ stories to make policy issues — e.g., OSHA reform — more relevant to the general reader. Compelling print or broadcast stories that focus on victims of workplace accidents can attract a far wider and potentially more influential audience than a white paper or journal article. Investigative reports on oil refineries, asbestos and vinyl chloride will be cited as examples.

CR 308  
Hazardous Materials Shipping and Transportation  
10:30 a.m.–11:30 a.m. + OCC, B110  
Presenter: R. Knight, AMEC, Portland, OR.  
Moderator: V. Holden, CH2M HILL Plateau Remediation Company, Richland, WA.

The forgotten agency ... DOT. This presentation will discuss who is covered by the DOT regulations and how to meet the regulatory requirements. Awareness training — how the DOT system works. Function specific training — your specific ways to handle and store hazardous materials. Safety training-how to use the 2008 DOT Emergency Response Guidebook. Security awareness training — how to keep the bad guys away from your hazardous materials.

CR 309  
Safety Culture: Motivation and Influence  
10:30 a.m.–11:30 a.m. + OCC, D138  
Presenter: M. Levitsky, O. Malik, ECOH Management Inc., Mississauga, ON, Canada.  
Moderator: S. Weeks, Hargrove Engineers + Constructors, Mobile, AL.

This session will explore how health and safety professionals can influence safety culture, probing in greater depth a topic introduced in a highly rated crossover presentation at AIHce 2010. It will present discoveries from social marketing, behavioral economics, and decision-making theories that help us understand the choices and actions of employers and workers. It will then explore how participants can use these insights to generate strategies for motivating safety culture in their own workplaces.

PO 111  
Field Detection, Sampling and Analysis: Real Time Detection Systems  
10:30 a.m.–12:30 p.m. + OCC, A106  
Arranger: W. Groves, Penn State, University Park, PA. Moderator: P. Smith, Uniform Services University, Bethesda, MD.  
Monitors: M. Roe, 3M Company, Blaine, MN; L. Monteith, University of Washington, Seattle, WA.

10:30 a.m.  
Fast GC Analysis with PID and FUV Detectors for Industrial Hygiene Monitoring at Low ppb Levels. (PO 111-1) J. Driscoll, D. Walsh, PID Analyzers, LLC, Pembroke, MA; P. Smith, Uniform Services University, Bethesda, MD.  
10:50 a.m.  
Improved Exposure Assessment with Person-Portable Gas Chromatography-Mass Spectrometry. (PO 111-2) P. Smith, OSHA, Salt Lake City, UT.  
11:10 a.m.  
11:30 a.m.  
Laboratory Comparison of Photo-Ionization Detector (PID) and Sorbent Tube Sampling for Measuring m-Xylene and n-Hexane. (PO 111-4) W. Groves, B. Marpoe, Penn State University, University Park, PA; E. Lee, M. Harper, J. Slaven, NIOSH, Morgantown, WV.  
11:50 a.m.  
Effect of Environmental Condition on Performance of Two Direct-Reading Organic Vapor Monitors. (PO 111-5) R. Lebouf, C. Coffey, T. Pearce, NIOSH, Morgantown, WV.  
12:10 p.m.  
Indirect Monitoring of Hexavalent Chromium Concentrations During Stainless Steel Welding Operations Using a Grimm 1.109, a TSI 8520 DustTrak, and a Haz-Dust EPAM 5000. (PO 111-6) L. Pahler, R. Larson, The University of Utah, Salt Lake City, UT.

PO 112  
Healthcare Industries I: Exposure Assessment and Control  
10:30 a.m.–12:30 p.m. + OCC, F149  
Arranger: M. Jones, Department of Veterans Affairs, Iowa City, IA. Moderator: S. Derman, Medishare Environmental Health & Safety Services, Santa Clara, CA.  
Monitors: M. Jones, Department of Veterans Affairs, Iowa City, IA; N. Rice, Intermountain Healthcare, Salt Lake City, UT.

10:30 a.m.  
Evaluation and Control of Dust from Lead Shielding in a Health Care Facility. (PO 112-1) J. Nesbitt, D. Krageschmidt, G. Sturchio, Mayo Clinic, Rochester, MN.  
10:50 a.m.  
Evaluation of Staff X-Ray Exposure and Protection Requirements in Operating Rooms. (PO 112-2) R. Ciconte, Fraser Health, Burnaby, BC, Canada; A. Yu, Fraser Health, New Westminster, BC, Canada.  
11:10 a.m.  
Evaluating Exposures to Waste Anesthetic Gases during Head and Neck Surgeries. (PO 112-3) L. Svenson, Veritox, Portland, OR; M. Krause, Veritox, Redmond, WA.  
11:30 a.m.  
Helicopter Exhaust Entrainment in a Hospital Laboratory: Assessment of Adverse Air Quality Outcomes after the Application of Controls. (PO 112-4) P. Chua, Fraser Health, Burnaby, BC, Canada.  
11:50 a.m.  
Hazardous Specimens in Medical Archive Collections. (PO 112-5) D. Krageschmidt, J. Nesbitt, K. Van Hoven, Mayo Clinic, Rochester, MN.
An Overview of Recent Results from Nanomaterials Toxicology—Key Results from Inhalation and in vitro Studies. C. Geraci, NIOSH, Cincinnati, OH.

Nanoscale Toxicology—Key Results from Inhalation and in vitro Studies. C. Geraci, NIOSH, Cincinnati, OH.

Nanoscale Exposure Assessments—Status of the NIOSH Carbon Nanotube Industriewide Study. M. Dahm, NIOSH, Cincinnati, OH.

Risk Assessment Approaches for Nanomaterials. F. Kumpel, NIOSH, Cincinnati, OH.

Advances in Respiratory Protection and Personal Protective Equipment. A. Rengasamy, NIOSH, Pittsburgh, PA.
Green construction and the use of environmental rating systems such as the US Green Building Council LEED (Leadership in Energy and Environmental Design) continue to grow. It is clear that taking steps to reduce building energy and environmental impacts is important. However, the relationship between green construction practices and occupational safety and health is less clear. Do green practices offer benefits for safety and health? Do they introduce hazards? What steps do we need to be taking to better integrate safety and health into green practices to make sustainability a more comprehensive concept? What can we learn from green rating systems to encourage safety and health best practice? What insights can industrial hygienists working on green construction sites share about integrating safety and health? Roundtable speakers will address these questions, share perspectives on the panel will be open for audience questions.

The role of a radiation safety officer is normally routine implementation of a radiation safety program. However, every program should have plans for emergencies or surprises. When a surprise incident occurs will you be prepared? Typical incidents could include a spill of radioactive material; a lost source; a damaged sealed source or X-ray machine; potential radiation exposures; damage from a fire, flood, or winds; or a violation of regulations or safety program requirements. A panel of career specialists with substantial radiation emergency response experience will address how to manage radiation surprises. The panel of CHPs and CIHs brings over 100 years’ of experience in radiation safety program management and response to radiation surprises. Each panel member will make a short presentation in the area of their technical experience, and then the panel will be open for audience questions. This roundtable will also include a special memorial lecture in tribute to Dr. Herman Cember for his 60-year career in teaching industrial hygienists and others for better understanding of radiation.

The global regulatory EH&S shifts experienced over the past two years have had significant impact on business models; basic science research; technology development; risk evaluation, mitigation and communication; product stewardship; environmental, health and safety processes; and, ultimately, lifestyle choices. While the global EH&S community’s “view” is generally aligned directionally on the need for a greener and more sustainable future, the approaches and deliverables vary markedly. The first half of the roundtable presents historical background on the beginnings of risk assessment and management and their translation in the global regulatory community, as well as a synopsis of key regulatory changes, drivers and impacts that have characterized major shifts during the past five years. The second half of the roundtable will employ a presidential debate format in which nationally acclaimed leaders share their sometimes divergent views and respond to specific inquiries. Audience engagement will encourage a robust discussion of the approaches, needs, companion regulations, drivers and impact associated with these changes. This roundtable is a must for all EH&S professionals seeking to understand the major regulatory and legislative changes globally and potential impacts on business, EH&S and overall risk decision making.

Please!

Return session evaluations; bins are centrally located near meeting rooms.
PO 114

Personal Protective Clothing and Equipment

10:30 a.m.–12:50 p.m. + OCC, Oregon 203

10:30 a.m.

Aerosol Penetration through Particulate Protective Clothing Materials. (PO 114-1) A. Mathews, S. Que Hee, University of California, Los Angeles, Los Angeles, CA.

10:50 a.m.

Equipment

11:10 a.m.

Integrity of Disposable Nitrile Exam Gloves Exposed to Simulated Movement. (PO 114-5) R. Phalen, California State University San Bernardino, San Bernardino, CA; W. Wong, University of California, Los Angeles, Los Angeles, CA.

12:10 p.m.

A Web Computer Tool for the Selection of Glove Material against Chemicals Based on the “Hansen Solubility Parameters” Theory. (PO 114-6) D. Drolet, J. Lara, IRSSST, Montreal, QC, Canada; G. Perron, Consultant, Boucherville, QC, Canada; F. Zimmermann, A. Chollot, INRS, Vandoeuvre-lès-Nancy, France; C. Hansen, Consultant, Hoersholm, Denmark; R. Bourbonnais, Consultant, Laval, QC, Canada.

12:30 p.m.


PO 115

Computer Applications

10:30 a.m.–12:50 p.m. + OCC, C121

10:30 a.m.

IH and Occupational Health Professionals Communicating? (PO 115-1) K. Wisniewski, S. Parker-Monk, P. Steven, U.S. Army, Gunpower, MD.

10:50 a.m.

Safety Toolkit — Occupational Health and Safety Management Systems Tools. (PO 115-2) A. Ornstein, LMI, San Antonio, TX; J. Yasalonis, LMI, Aberdeen, MD; M. Kephart, LMI, Portland, OR.

11:10 a.m.

Using Database Software to Manage IH Exposure Data. (PO 115-3) K. Jaggassar, Briggs, ENVIRON International Corporation, Boston, MA; P. Webb, National Grid, Waltham, MA.

11:30 a.m.

Implementing a Global Database for Exposure Monitoring and Risk Assessment in Shell Oil Company. (PO 115-4) P. Owens, Shell Oil Company, Martinez, CA.

11:50 a.m.

Utilizing Web-Based Tools for an Effective Risk Management Program. (PO 115-5) C. Shaw, Succeed Management Solutions, LLC, Wilsonville, OR.

12:10 p.m.

Development of a Sample Size Calculator Using Land’s Exact Procedure to Assess Occupational Exposures. (PO 115-6) P. Gao, NIOSH, Pittsburgh, PA.

12:30 p.m.

Preparing Your Organization for GHS Compliance. (PO 115-7) J. Braselman, Safetec, York, PA.

The Exposome: The Future of Exposure Science?

11:00 a.m.–Noon + OCC, C126
Presenters: M.D. Hoover, NIOSH, Morgantown, WV; M.A. Maier, TERA, Cincinnati, OH; D.G. DeBord, NIOSH, Morgantown, WV; M.A. Maier, TERA, Cincinnati, OH.

Despite decades of research, the etiology of many occupational diseases remains largely unknown. Evidence indicates that the origins of certain chronic diseases have both genetic and environmental components. To better define the study of the environmental components, a new term, “Exposome,” is being used to refer to the totality of a person’s exposures. New methods and approaches for addressing the concept of “total cumulative exposure” are being used by many health agencies and impact current risk assessments for occupational and environmental scenarios. This panel presentation provides background on understanding and applying exposomics to assess and protect worker health. Case studies with be presented, as well as gaps in opportunities for collaboration to share data and to develop and implement improved protection strategies.
Following this session, a facilitated luncheon discussion will be held in the Expo from 12:30 p.m. to 1:30 p.m. Discussion will focus on obtaining input from participants on opportunities for collaboration and impact. Luncheon discussion seating is first-come, first-served.

CR 310

OSHA Construction and General Industry Standards: Why You Need to Understand Both

11:30 a.m.–12:30 p.m. + OCC, B119

**Presenter:** D. Mazary, DuPont Sustainable Solutions, Virginia Beach, VA. **Moderator:** S. Weeks, Hargrove Engineers + Constructors, Mobile, AL. **Monitor:** A. Rodionova, University of California, Berkeley, CA.

Attendees will learn the answers to these important questions:

+ Do you know why your employees really need training in the OSHA Construction Standards even though you work in manufacturing?
+ Are there specific state regulations that mandate this OSHA Construction Standards training for some employers?
+ What are some of the significant differences when comparing the OSHA General Industry Standards with the Construction Standards?

Luncheon Discussions

NIOSH Table Talks

12:30 p.m.–1:30 p.m. + OCC, Expo, Hall D

1. Engineering Controls

**Moderator:** R.M. Hall, NIOSH, Cincinnati, OH.

NIOSH engineering control efforts include planning and conducting research on engineering control technologies to prevent worker exposures to hazards and promoting the use of effective engineering control technologies that protect workers. NIOSH researchers evaluate workplaces and develop practical, solutions-oriented control technology interventions. NIOSH scientists and engineers work collaboratively with companies, unions, trade associations, labor organizations, universities, and governments, in the U.S. and around the world. Discuss areas of engineering control research within NIOSH.

2. Hispanic Outreach

**Moderator:** D. Ceballos, NIOSH, Cincinnati, OH.

The NIOSH Health Hazard Evaluation Program (HHE) conducts workplace evaluations to learn whether workers are exposed to hazardous materials or harmful conditions, and a report is prepared to document findings and recommend hazard corrections. Participants will discuss the need for promoting Hispanic participation in this program and have the opportunity to discuss how to increase requests from Hispanic employees and employers. Participants will also discuss potential collaboration with other institutions and dissemination of materials to support Hispanic outreach efforts.

3. Improving NIOSH Identification of New and Emerging Hazards

**Moderator:** A. Sussell, NIOSH, Cincinnati, OH.

NIOSH occupational surveillance programs help identify emerging hazards through case reports received in health hazard evaluations (e.g., flavorings, SARS, and silica in roofing) and programs to assess fatalities as well as hazards of nanomaterials and fire fighting. However, gaps remain. How could NIOSH improve identification and prioritization of emerging hazards? How do practitioners identify new hazards? What information do practitioners need on emerging hazards? How could NIOSH best share this information?

4. Services Sector Exposure Risks

**Moderator:** D. Utterback, NIOSH, Cincinnati, OH.

The NORA Services Sector includes over 65 million workers across 11 NAICS industry sectors. Many jobs and tasks in services industries place workers at risk for exposures to chemical, physical and biological agents, in addition to ergonomic hazards. NORA goals list several services industry sectors where greater exposure information is needed: automotive repair, building services, education, hotels, public administration, recreation and solid waste. Participants will discuss significant hazards in these industries and identify sources of information on exposure potentials. A matrix of job titles by industry classes will help define opportunities for further investigations.

5. Nanotechnology

**Moderator:** C. Geraci, Laura Hodson, NIOSH, Cincinnati, OH.

NIOSH is the leading federal agency conducting research and providing guidance on the occupational safety and health implications and applications of nanotechnology. This research focuses on emerging hazards. NIOSH's scientific expertise on answering the essential questions to understanding these implications and applications. NIOSH has conducted numerous field investigations to evaluate exposures and control techniques. NIOSH is also partnering with nanomaterial companies to develop case studies on the effectiveness of using a Prevention through Design approach when designing or expanding their processes and to demonstrate the utility of a hazard and control banding approach for risk management of engineered nanomaterials.

6. Heat Stress and Hot Environments

**Moderator:** B. Jacklitsch, NIOSH, Cincinnati, OH.

NIOSH is evaluating the scientific data on heat stress and hot environments and is updating the Hot Environments Criteria Document. A draft document for comment is expected in the latter half of 2011. NIOSH is particularly interested in comments on the following areas: (1) workplaces that are considered hot environments; (2) control measures; (3) possible long-term, cognitive, or reproductive health effects in workers’ (4) effects of climate change; (5) impact on productivity and number of accidents; (6) susceptible sub-groups; and (7) heat tolerance and shift work.

7. Diacetyl and Diacetyl Substitutes

**Moderator:** L. McKernan, NIOSH, Cincinnati, OH.

Occupational exposures to diacetyl have been associated with flavorings-related lung disease, including bronchiolitis obliterans. In response, companies have begun to use substitutes, such as 2,3-pentanedione, to reduce diacetyl exposure. Published abstract reports on the toxicity of 2,3-pentanedione suggest that, in rats, 2,3-pentanedione causes airway epithelial damage similar to diacetyl. NIOSH is releasing a criteria document including a recommended exposure limit (REL) for both diacetyl and 2,3-pentanedione. This discussion will focus on the NIOSH REL process and updates on health effects, analytical chemistry, and exposure assessment methodologies.
8. NIOSH Publications and Products: What Can We Create to Meet your Occupational Safety and Health Needs?

Moderator: D. Van Bogaert, NIOSH, Cincinnati, OH.

Development of new channels of electronic communication and the needs of a new generation of workers indicate that NIOSH needs to change its methods of providing information. NIOSH is evaluating new channels of electronic communication for occupational safety and health information to meet these changes. NIOSH will share what it learned about workplace information wants and needs from their most recent Customer Service Survey. Participants are invited to contribute their thoughts about ideas for new information product development, gaps in current NIOSH information and products, and new methods of dissemination.

9. NIOSH Manual of Analytical Methods

Moderator: K. Ashley, NIOSH, Cincinnati, OH.

The NIOSH Manual of Analytical Methods (NMAM) is a collection of methods for sampling and analysis of contaminants in workplace air (or surfaces) and in the blood and urine of workers who are occupationally exposed. These methods were developed or adapted by NIOSH or its partners and were evaluated according to established experimental protocols and performance criteria. NMAM also includes chapters on quality assurance, sampling, portable instrumentation, etc. Often, NIOSH methods are developed in coordination with voluntary consensus standards organizations (ASTM International and ISO). Participants will discuss NMAM methods under development and needs for new methods and updates.

10. Understanding and Exploring the Exposome

Moderators: M.D. Hoover, NIOSH, Morgantown, WV; A. Maier, TERA, Cincinnati, OH; D.G. DeBord, NIOSH, Cincinnati, OH.

Discussion will focus on obtaining input from participants on the role of exposomics in the exposure sciences and on opportunities for collaboration and impact for protection of worker health.

William P. Yant Award Lecture

Can We Show that Exposure is Really Below the Limit? Some Developments in Sampling Strategy

Lecturer: Trevor Ogden, British Occupational Hygiene Society and Co-chair, BOHS-NVvA
Sampling Strategy Working Group, Derby, UK. Co-author: Jérôme Lavoué, Centre Hospitalier de l’Université de Montréal, Canada.

ACGIH® is wise to emphasise that “TLVs are not fine lines between safe and dangerous conditions” and that they should be interpreted only by someone trained in industrial hygiene. Unfortunately, all over the world, regulators are not as wise and regard exposure limits exactly as if they were “fine lines” not to be exceeded. With exposure varying in a quasi-log-normal fashion, it is difficult for a hygienist to plan a sampling program of reasonable size that reliably predicts the probability of compliance. The AIHA Manual* is probably the hygienist’s best guide to managing exposure. Can we also devise a sampling strategy that will convince regulators that an exposure limit will not be exceeded?

Various authorities have given guidance on this over the years, and the guidance has changed to reflect research and experience. The British and Dutch occupational hygiene societies set up a joint working party in 2007 to produce guidance for their members. A draft was published for public comment in late 2009, which amongst other things tried to formally build individual variability into a strategy. Many comments were received from all over the world, and these included computer simulations of the strategy, which showed that the combination of approaches in the draft was seriously flawed. Also, during the consultation period, a French regulation exceeding? regulators that an exposure limit will not be exceeded?

JLG Industries, Inc.

FS60 LiftPod® by JLG, JLG Industries, Inc.

JLG is pleased to announce the availability of the new LiftPod® FS60. We are continuing to focus on the wants and needs of our end-users, and the LiftPod FS60 delivers a 12 ft. height access solution to address the applications for the safety and facility managers in the health care, education and office building markets. Improve your productivity with the LiftPod® by JLG. The FS60 has a 30” wide base that rolls through standard width doorways, making moving from location to location a breeze. Nonmarking reuse casters wheels optimize mobility in tight spaces, while a compact mast provides clearance in lower ceiling environments. Be more productive while meeting OSHA safety standards. Visit www.liftpod.com for additional information.

Workshop

Unsolved IH Mysteries Workshop

12:30 p.m.-2:00 p.m. + OCC, D133

Facilitator: Fred Boelter, CIH, PE, BCEE, Environ International, Chicago, IL.
CR 311
Culture and Exposure Control
2:00 p.m.–3:00 p.m. + OCC, D139
Presenter: D. Groover, BST, Ojai, CA.

There is a growing body of evidence regarding the relationship between the behavior of employees with regard to compliance to safety and health rules and policy and attributes of culture. Seemingly unrelated attributes like fairness and transparency in decision making can have a direct and predictive effect on compliance. This talk will summarize these studies and explore the correlation and outline the implications of moving from a culture of compliance to a culture of commitment.

CR 312
Lessons Learned from Teaching Lead RRP, and an Update on EPA’s Rule
2:00 p.m.–3:00 p.m. + OCC, D138
Presenter: G. Baker, AMEC Earth & Environmental, Inc., Portland, OR.
Moderator: P. Stanch, NASA, Houston, TX.
Monitor: K. Hauck, University of Iowa, Iowa City, IA.

This presentation provides an overview of EPA’s Lead Renovation, Repair and Painting (RRP) rule. Recent rule changes will be highlighted along with lessons learned from having taught thousands of contractor employees. Lead RRP does not emphasize OSHA regulations related to renovation, and this is causing problems, specifically for contractors, subcontractors, tenants, and the public. The presenter/trainer will share data from his pre-class questionnaire that suggests that most small renovation contractors are chronically out of compliance with several OSHA rules.

RT 221
Addressing the Hazards of New and Emerging Issues within the Workplace
2:00 p.m.–4:30 p.m. + OCC, Oregon 202
Arranger and Moderator: G. Dotson, NIOSH, Cincinnati, OH.
Monitors: B. Beadie, PCA Health and Safety Consultants, Lake Oswego, OR; A. Rossner, Clarkson University, Potsdam, NY.

Limited or no data are often available to assist in evaluating the health risks associated with occupational exposure to new or emerging issues. In the absence of such data, how can the health risks of these new and emerging hazards be effectively evaluated? This roundtable is intended to address the challenges associated with addressing the hazards of new and emerging issues within the workplace. Specific topics that will be covered include (1) Understanding the relationship between exposure assessments and human health risk assessments; (2) Application of the National Academy of Sciences (NAS) risk assessment paradigm to evaluate new and emerging issues; and (3) Using a structured framework to classify emerging exposures and interpret exposure data for use in risk assessments. Case studies will be presented to illustrate both broad concepts and specific examples encountered during the evaluation of new and emerging issues, including (1) Risk management approaches associated with new or emerging technologies, including engineered nanomaterials; (2) Industry’s perspective to managing the risks of hazards in the workplace; and (3) Identification and measurement of diacetyl substitutes.

RT 222
Fit-Testing Hearing Protection Devices: Technology, Application, and Implementation
2:00 p.m.–4:30 p.m. + OCC, B113
Arranger: C. Johnson, University of Minnesota, St. Paul, MN.
Moderator: J. Ratliff, Kanto Corporation, Portland, OR.
Monitors: S. Culbert, 3M Company, St. Paul, MN; J. Tiedinnick, University of Minnesota, St. Paul, MN.

With the advent of field attenuation measurement systems for hearing protectors, occupational health professionals are now being asked to organize fit-testing programs. There are many challenges associated with implementing a successful fit-testing program. The panelists in this roundtable will offer important perspectives on the currently available technologies, provide information about current standards for fit-testing devices, and provide helpful insight for the practicing hygienist about implementing a successful testing program. Panelists will discuss research relating to hearing protection usage, fit, performance, and efficacy.

RT 223
Healthcare Construction: Moving Forward
2:00 p.m.–4:30 p.m. + OCC, B119
Arranger and Moderator: B. Geer, Mission Support Alliance, Snohomish, WA.
Monitors: M. Krause, Veritox, Redmond, WA; M. Rose, Rose Environmental, Seattle, WA.

In all health care facilities, the delivery of quality health care and construction activity is in constant conflict. Both are vitally important to patients, staff, and organization but are seemingly incompatible with one another. Industrial hygienists and the application of industrial hygiene principles have played a significant role in supporting patient safety, infection prevention, occupational health, and construction goals; however, construction projects continually increase in complexity, at-risk patient...
populations expand, and novel and increasing challenges are presented by construction. New approaches to these challenges have been developed and include the formation of unique construction management and oversight teams to comprehensively integrate safety throughout all construction projects in an institution, apply industrial hygiene principles for infection prevention purposes during HVAC system duct relocation projects in an operating health care facility with at-risk patients, implement successful administrative management of construction noise where engineering controls failed, and apply LEED principles to health care facilities to achieve sustainability goals outside of strictly following LEED guidelines.


- Playing the Hand Youre dealt — Applying IH Principles to Challenging Healthcare Construction Projects. L. Lee, Pacific Industrial Hygiene LLC, Kirkland, WA.

- Finding the Balance between Polyanna and Chicken Little When Communicating the Impact of Construction Noise. J. Pierce, Virginia Mason Medical Center, Seattle, WA.

- The Future of LEED in Health Care. D. Green, Kaiser Permanente, Hillsboro, OR.

**RT 225**

**NFPA 70E — Understanding Requirements, Relationships and Responsibilities**

*2:00 p.m.–4:30 p.m. + OCC, A106*

**Arranger:** S. Fess, Xerox Corporation, Webster, NY. **Moderator:** T. Martin, DTE Energy Resources, Ann Arbor, MI. **Monitors:** G. Crawford, Weston Solutions Inc., West Chester, PA; J. Ingram, EH&S Consultant, Alameda, CA.

NFPA 70E (the National Electrical Code – Appendix E) was written and has been implemented to provide the practicing electrical specialist (electrician, engineer, power distribution specialist, maintenance personnel, etc.) better protection from the potential hazard known as an arc flash or arc blast. These requirements also apply to prevent worker shock and electrocution during energized work. Anyone involved in electrical work over 50V AC is now required to follow the requirements of this standard. Workplace audits and project plan reviews have shown that basic knowledge and acceptance of compliance requirements is still unknown to many companies and individuals. While this currently is a voluntary consensus standard, enforcement by OSHA with major penalties does occur. This roundtable will examine aspects and examples of compliance activities from the perspective of the customer, contractor, and instructor. The presenters will provide ideas and recommendations to aid in improving electrical safety practices and compliance at your workplace.

- NFPA 70E Requirements for Host Employer / Contractor Relationships. P. Zoubek, Zoubek Consulting, LLC, San Diego, CA.

- Contract Specifications and Compliance with NFPA 70E Calculations, Labeling, and Requirements. S. Eversmeyer, Port of Portland, Portland, OR.


- Electrical Safe Work Practices: OSHA 1910.332–335 / NFPA 70E. M. Murphy, Center to Protect Worker Rights, Junction City, OR.

- The Contractor's Perspective on the 70E Standard's Requirements and How to Assure Compliance and Examples of What Is Experienced and Seen at Customer Locations: The Old, the New and the Unexpected. G. Fadden Sr., Christenson Electric, Inc., Portland, OR.

- Electrical Safe Work Practices: OSHA 1910.332–335 / NFPA 70E. M. Murphy, Center to Protect Worker Rights, Junction City, OR.

**SS 002**

**Science Symposium: Emerging Exposure Assessment Methods for Occupational Epidemiology Studies**

*2:00 p.m.–4:30 p.m. + OCC, F149*

**Arranger and Moderator:** S. Viet, Westat, Steamboat Springs, CO. **Monitors:** T. Armstrong, TW A8HR Occupational Hygiene Consulting, Branchburg, NJ; S. Maberti, ExxonMobil, Houston, TX.

- A Biologic Approach to Environmental Assessment and Epidemiology. D. Kriebel, Department of Work Environment, University of Massachusetts Lowell, Lowell, MA.

- Use of the OSHA IMIS Database for Exposure Assessment in Occupational Epidemiology. J. Lavoué, Centre de Recherche du CHUM, Montreal, QC, Canada.

- Use of Exposure and Exposure Determinants Data to Model Exposures for Occupational Epidemiology Studies. M. Waters, NIOSH, Cincinnati, OH.

- The Challenges with Conducting Epidemiologic Studies using Deployed Military Cohorts and Mixed Exposures. C. Rennix, Navy and Marine Corps Public Health Center, Williamsburg, VA.

- Incorporating Dermal Exposure into Retrospective Exposure Assessment. J. Sahmel, ChemRisk, Boulder, CO.
**PO 116**  
**Respiratory Protection I**  
2:00 p.m.–5:00 p.m. + OCC, C121  
**Arranger and Moderator:** J. Noble, Ascend Performance Materials, Gonzalez, FL.  
**Monitors:** W. Bishop, DTE Energy, Detroit, MI; J. Parker, NIOSH, Pittsburgh, PA.  

**2:00 p.m.**  
Enhanced Respiratory Protection Offered by a Strapless Filtering Facepiece Respirator. (PO 116-1) S. Grinshpun, T. Reponen, R. McKay, K. Cho, University of Cincinnati, Cincinnati, OH.  

**2:20 p.m.**  
**Head and Face Shape Variations of U.S. Civilian Workers.** (PO 116-2) Z. Zhuang, NIOSH, Pittsburgh, PA; C. Shu, P. Xi, National Research Council of Canada, Institute for Information Technology, Ottawa, ON, Canada; M. Bergman, URS Corp., Pittsburgh, PA.  

**2:40 p.m.**  
Total Inward Leakage — An Assessment of Variation in the Implementation of Anthropometric Marking and Measurement Techniques. (PO 116-3) A. Quiring, Scott Health & Safety, Monroe, NC.  

**3:00 p.m.**  

**3:20 p.m.**  
Advances in Mask Integrity Testing. (PO 116-5) E. Hanson, M. Serach, Air Techniques International, Owings Mills, MD.  

**3:40 p.m.**  
Comparison of Pressure Drop and Filtration Efficiency of Particulate Respirators Using Welding Fume and NaCl. (PO 116-6) C. Yoon, H. Zhao, Seoul National University, Seoul, Republic of Korea; J. Lee, S. Lee, 3M Company, Suwon, Republic of Korea; A. Viner, E. Johnson, 3M Company, St. Paul, MN.  

**4:00 p.m.**  
Factors Affecting Filter Penetration and Quality Factor. (PO 116-7) P. Chen, S. Huang, C. Chen, National Taiwan University, Taipei, Taiwan; C. Chen, Institute of Occupational Safety and Health, Taipei, Taiwan.  

**4:20 p.m.**  
Air-Purifying Cartridge Sensor Integration Approach for Active End of Service Life Indication. (PO 116-8) M. Parham, Tyco/Scott Health & Safety, Monroe, NC.  

**4:40 p.m.**  
Evaluation of the NIOSH SCBA Positive Pressure Test and NFPA Airflow Performance Test. (PO 116-9) J. Parker, J. Palcic, A. Reeder, NIOSH, Pittsburgh, PA.  

**RT 226**  
**Green Chemistry: Opportunities for the Industrial Hygienist**  
2:00 p.m.–5:00 p.m. + OCC, Oregon 204  
**Arranger:** M. Johnson, IHS, Englewood, CO.  
**Moderator:** K. Trefethen, Kaiser Permanente, Oakland, CA.  
**Monitors:** S. McCarthy, P. Rey, Exponent, Inc., Oakland, CA; S. Hays, Gobbell Hayas Partners, Inc., Nashville, TN.  

**3:00 p.m.**  

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**4:40 p.m.**  
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**A Risk Assessment Approach to Procuring Safer Alternatives.** E. Stewart, Kaiser Permanente National EH&S, Oakland, CA.  

**Red, Black and Green: How Green Cleaning Has Improved the Environment, Worker Safety and Bottom Line at the University of Georgia.** A. Lehocky, Board of Regents of the University System of Georgia, Atlanta, GA.  

**PO 117**  
**Indoor Environmental Quality I**  
2:00 p.m.–5:20 p.m. + OCC, D136  
**Arranger:** J. Hicks, Exponent, Inc., Oakland, CA.  
**Moderator:** S. Hays, Gobbell Hayas Partners, Inc., Nashville, TN.  
**Monitors:** S. McCarthy, P. Rey, Exponent, Inc., Oakland, CA.  

**3:00 p.m.**  
A Post-Construction, Pre-Occupancy Indoor Environmental Quality (IEQ) Baseline Survey for LEED Construction. (PO 117-1) S. Ndiritu, Kennesaw State University, Kennesaw, GA.  

**3:20 p.m.**  
Air Quality Monitoring During the Construction and Commissioning of the North Carolina Museum of Art. (PO 117-2) R. Herrick, Herrick Engineering Inc., Cary, NC.  

**3:40 p.m.**  
Lessons Learned from the First Generation of Green Buildings. (PO 117-3) V. Holden, CH2M HILL Plateau Remediation Company, Richland, WA.  

**4:00 p.m.**  
WITHDRAWN An Evaluation of Green Building Remodeling and Weatherization Programs for Content that Protects and Promotes Occupant Health. (PO 117-4) M. Kawamura, Institute for the Built Environment, Windsor, CO.  

**3:00 p.m.**  
Characterization of Indoor-Outdoor Air Quality at a Coast Guard Facility Near the Houston Ship Channel. (PO 117-5) T. Stock, L. Whitehead, L. Pompeii, D. Beasley, C. Maypole, University of Texas, Houston, TX.  

**3:40 p.m.**  
Recommended Practices for Sampling and Analysis of PCBs in Indoor Air. (PO 117-6) W. Mills, Mills Consulting Inc., Oak Park, IL.  

**4:00 p.m.**  
Investigation and Resolution of Air Quality Complaints Associated with the Breakdown of Carpet Materials in a New

4:20 p.m.
Validation, Expansion and Application of a Mass Transfer Model to Predict Diffusive Styrene Emissions from a Composite Building Material. (PO 117-8) S. Crawford, C. Lungu, University of Alabama at Birmingham, Birmingham, AL.

4:40 p.m.

5:00 p.m.

3:00 p.m.
The Industrial Hygiene Path to VPP. (PO 118-4) W. Adams, R. Moon, Safex, Inc., Westerville, OH; T. Reeves, Nucor, Marion, OH.

3:20 p.m.
Industrial Hygiene Exposure Management at a DOE Gaseous Diffusion Plant. (PO 118-5) J. Romine, Energy Solutions, Cincinnati, OH.

3:40 p.m.
Industrial Hygiene Assessment of Foundry Work. (PO 118-6) L. Kneten, R. Rogens, U.S. Army, Aberdeen Proving Ground, MD.

4:00 p.m.
Evaluation of Health and Safety in Small Auto Collision Repair Shops. (PO 118-7) A. Bejan, D. Parker, M. Skan, Park Nicollet Institute, Minneapolis, MN; L. Brosseau, University of Minnesota, Minneapolis, MN.

4:20 p.m.

4:40 p.m.
Total and Respirable Dust and Silica Exposures in the Simulated Lunar Operations (SLOPE) Facility. (PO 118-9) B. Hodgson, NASA, Cleveland, OH.

5:00 p.m.

5:20 p.m.
Fiber Escape from Asbestos Abatement Enclosures: Qualitative Results. (PO 118-11) P. Bozek, University of Toronto, Toronto, ON, Canada.

5:40 p.m.
In-Cab Employee Exposure Assessment during Street Sweeping Operations. (PO 118-12) J. Biddle, Northern Arizona University, Flagstaff, AZ.

RT 227
Integrated Solutions in Sustainable Occupational Health and Safety Management Systems

2:00 p.m.–6:00 p.m. + OCC, B116

Development and implementation of sustainable management solutions is one of the key factors for industry to improve occupational health and safety performance. For the OHS management system to be efficient, it is necessary to provide integration between different levels of management, including interactions with quality and environmental management systems, corporate culture and psycho-social atmosphere, as well as general structure and mechanisms of company governance. During the roundtable, the international management models and auditing specifications such as OHSAS 18001:2007, ANSI Z-10, and ISO 19011 will be discussed in the context of their incorporation into a wider environment. Pro and cons of the British PAS 99 integrated management specification and other generic management solutions will be compared. Special attention will be paid to the practical application of using ANSI/AIHA Z10, as well as the expected changes and improvement in this important national document. Recommendations are offered for interested parties on how to utilize management system integration with the aim of reducing of occupational health and safety risks, driving continuous improvement and preventing injury and illness.

The Evolution of Integrated Management Systems and Why This Is Important to Understand. C. Redinger, Redinger EHS, Inc., Harvard, MA.


Auditing Integrated Management Systems — The Impact of ISO 19011. T. Dunmire, ENLAR Compliance Services, Largo, FL.

The National Institute for Occupational Safety and Health (NIOSH) Health Hazard Evaluation (HHE) program provides a mechanism by which employees, unions, and employers across the United States can request free assistance from NIOSH in addressing occupational health concerns in the workplace. In response to some of these HHE requests, NIOSH industrial hygienists and medical officers perform on-site evaluations and often encounter a wide variety of both common and unique workplace exposures and health hazards. This roundtable will present the results of several HHEs performed by NIOSH industrial hygienists that illustrate a broad spectrum of potential health hazards encountered in workplaces. The overall objective is to provide practicing hygienists with an understanding of how NIOSH industrial hygienists develop their strategy for assessing the workplace. We will also discuss the health hazards that were identified during the evaluations and the recommendations provided to reduce or eliminate the hazards and protect workers.

**RT 228**

NIOSH Health Hazard Evaluations: Results of Recent Industrial Hygiene Evaluations

2:00 p.m.–6:00 p.m. + OCC, Oregon 203

**Arranger:** S. Brueck, NIOSH, Cincinnati, OH.

**Moderator:** T. Seitz, NIOSH, Cincinnati, OH.

**Monitors:** L. Chen, S. Durgam, NIOSH, Cincinnati, OH.

This session will describe actions undertaken by OSHA in response to the Deepwater Horizon Oil Spill. The panel of speakers will address various aspects of the response from OSHA's role under the National Contingency Plan, training, outreach, hazard assessment, exposure monitoring and the outcomes of OSHA's efforts.

**RT 229**

OSHA’s Response to the Deepwater Horizon Oil Spill

2:00 p.m.–6:00 p.m. + OCC, Oregon 201

**Arranger and Moderator:** C. Coe, OSHA, Atlanta, GA.

**Monitors:** C. Coe, OSHA, Atlanta, GA; R. Fairfax, OSHA, Washington, DC.

**CR 313**

TSCA Regulatory Compliance: Challenges and Solutions

3:30 p.m.–4:30 p.m. + OCC, D139

**Presenter:** T. Webber, 3E Company, Carlsbad, CA.

**Moderator:** D. Blurton, Consultant, Portland, OR.

This session will describe actions undertaken by OSHA in response to the Deepwater Horizon Oil Spill. The panel of speakers will address various aspects of the response from OSHA's role under the National Contingency Plan, training, outreach, hazard assessment, exposure monitoring and the outcomes of OSHA's efforts.

**Overview of the Deepwater Horizon Oil Spill Response Event:** C. Payne, OSHA, Jackson, MS.

**OSHA's Role in the Deepwater Horizon Oil Spill Response:** C. Jones, OSHA, Washington, DC.

**Site Safety and Health Plans for the Deepwater Horizon Oil Spill Response:** K. Petermeyer, OSHA, Mobile, AL.
ENGINERED UNBOUND NANO PARTICLES

MITIGATE RISK
ENSURE COMPLIANCE
PROTECT WORKERS

When working with unbound nanoparticles (UNP), RJ Lee Group can help alleviate concern about potential sources of exposure to workers and the environment. Our experts will conduct a customized study to assess the potential release of UNP and then determine appropriate control measures.

LEARN MORE

“Evaluation of the Potential Release of Unbound Engineered Nanoparticles at Laboratory Research Facility.”

RJ Lee Group Podium Session:
May 18, 6:20
Wednesday, May 18

7:00 a.m.-5:30 p.m.
Volunteer Collaboration Café
OCC, Lobby C

7:30 a.m.-3:00 p.m.
Press Room
OCC, D132

7:30 a.m.-4:00 p.m.
Registration and Hotel Reservations
OCC, Lobby A

7:30 a.m.-6:30 p.m.
Speaker Ready Room
OCC, C124

8:00 a.m.-9:00 a.m.
General Session:
OSHA: Initiatives, Challenges, Directions
David Michaels, PhD, MPH,
Assistant Secretary of Labor,
OSHA, Washington, DC
OCC, Portland Ballroom

9:00 a.m.-1:00 p.m.
Poster Sessions
OCC, Hall B
Poster Session 405
(Graduate and Undergraduate Students)
Authors Present 10:00 a.m.-Noon
WD 503 2nd International Symposium on
Wood Dust: Monitoring and Control
OCC, A108

9:00 a.m.-1:30 p.m.
Visit the Expo!
OCC, Halls B-E
Daily Prizes, Special Displays,
Cyber/Message Centers, Restaurants,
Lounges, Expo Theater
No sessions 9:00 a.m.-10:00 a.m. and Noon-1:00 p.m.

9:00 a.m.-4:00 p.m.
AIHA CareerAdvantage Development Fair 2011
OCC, Hall A

9:30 a.m.-1:00 p.m.
Exhibitor Product Demos and Presentations
Expo Theater, Hall D
See presentation descriptions on pages 68 and 72.

9:30 a.m.-1:30 p.m.
TT-05 SolarWorld Industries of America
OCC, Bus departs MLK entrance; board by 9:15 a.m.

10:00 a.m.-11:00 a.m.
CR 314 Construction Noise: Managing Community Expectations
OCC, B113
CR 315 OSHA Local and National Emphasis Program Inspections--How Companies Can Get Prepared
OCC, B110
10:00 a.m.-11:30 a.m.
Ask the Expert: Dr. David Michaels
OCC, B119
10:00 a.m.-Noon
PO 119 All Things Radiation
OCC, D136
PO 120 Alternate Exposure Assessment Strategies
OCC, Oregon 202
RT 230 A Conceptual Discussion of Safety and Health Implications for the Workplace
OCC, B116
RT 231 American Board of Industrial Hygiene Forum
OCC, D139
RT 232 Ethical Decision Making in Sustainability and Management Systems
OCC, F152
RT 233 Incorporating Life Cycle Analysis in Business: Opportunities for the EHS Professional
OCC, A106
RT 234 Risk Assessment Applied to Engineered Nanomaterials: Managing Risk with Limited Data
OCC, Oregon 201
10:00 a.m.-12:20 p.m.
PO 121 Case Study Methodologies for Skin and Respiratory Exposures
OCC, Oregon 204
PO 122 International Globalization
OCC, F149
10:00 a.m.-12:40 p.m.
PO 123 Environmental Issues for Industrial Hygienists
OCC, Oregon 203
PO 124 Respiratory Protection II
OCC, C121

11:00 a.m.-2:30 p.m.
ST-06 Portland Spirit
Walk to Waterfront from the Hilton; meet at 11:00 a.m. in the Main Lobby, 6th St.

11:30 a.m.-12:30 p.m.
CR 316 PSM, RMP and CalARP Update and Resources for Employers
OCC, B113

Noon-1:00 p.m.
Luncheon Discussions — Volunteer Groups "Tech Talks"
OCC, Expo, Hall D

12:30 p.m.-1:30 p.m.
Cummings Award Lecture
OCC, D136

12:30 p.m.-2:00 p.m.
Unsolved IH Mysteries Workshop
OCC, D133

1:00 p.m.-2:00 p.m.
CR 317 Acquisition to Integration as Part of a Management System
OCC, D138
OCC, D139
1:00 p.m.-3:20 p.m.
PO 125 Health Care Industries II:
Construction, PPE and Other Topics
OCC, D138
1:00 p.m.-3:30 p.m.
RT 235 Effective Competent Persons for Illness and Injury Prevention Programs and OSHA Compliance
OCC, B116
1:00 p.m.-3:30 p.m.
RT 236 Emerging Technologies and Industries: OSHA's Approach, Activities, and Audience Exchange
OCC, Oregon 203
RT 237 Making Changes: Embracing an Uncertain Future and Thriving
OCC, F152
RT 238 Using Computer Applications to Demonstrate the IH Business Case as Part of the Value Strategy  
OCC, C121

SS 003 Science Symposium: New Paradigms for Exposure and Risk Assessment — Taking Alternative Temporal Exposure Patterns to Task  
OCC, Oregon 204

1:00 p.m.-3:40 p.m.  
PO 126 Reconstruction of Exposures: Methods and Application  
OCC, B113

1:00 p.m.-4:00 p.m.  
PO 127 New Issues in Biological and Chemical Sampling and Analysis  
OCC, B119

RT 239 10 Years Later: What Have We Learned from the WTC Attacks?  
OCC, Oregon 204

RT 240 The NIOSH Personal Protective Technologies Program  
OCC, E149

RT 241 OSHA’s I2P2: Should I Be Worried?  
OCC, A106

1:00 p.m.-5:00 p.m.  
RT 242 REACH Is Here: How and Where Its Impact Will be Felt by IH Professionals  
OCC, Oregon 204

1:30 p.m.-3:30 p.m.  
Emerging Issues Forum 1: Specializing: Keeping Yourself Relevant in the Changing Market  
OCC, A108

2:30 p.m.-3:30 p.m.  
CR 319 Slip Simulator Training: Slip-Trip-Fall Prevention  
OCC, D139

5:00 p.m.-6:00 p.m.  
CR 320 EHS, Lean and Six Sigma  
OCC, B113

CR 321 The Aging Work Force: Occupational Safety, Health, Hygiene and Wellness Considerations  
OCC, C126

5:00 p.m.-7:00 p.m.  
PO 128 Risk Assessment Methods and Applications  
OCC, B110

PO 129 Nanotechnology: Assessment and Control  
OCC, B119

5:00 p.m.-7:30 p.m.  
RT 243 Effective Adult SH&E Training Techniques: Some Tips and Lessons Learned  
OCC, B116

RT 244 Hazardous Drugs in Health Care - State of the Science and Emerging Issues  
OCC, C121

Note Meeting Rooms ...  
OCC = Oregon Convention Center

AIHA®

7:00 a.m.-9:00 a.m.  
Career and Employment Services Committee Meeting  
OCC, E144

8:00 a.m.-9:30 a.m.  
Pharmaceutical Round Robin Committee Meeting  
OCC, E143

9:30 a.m.-11:00 a.m.  
AIHA Past Presidents’ Brunch (by invitation)  
The Nines, Georgian Room

9:30 a.m.-11:30 a.m.  
Healthcare Working Group Meeting  
OCC, E141

Indoor Environmental Quality Committee Meeting  
OCC, E145

9:30 a.m.-12:30 p.m.  
Construction Committee Meeting  
OCC, E146

10:00 a.m.-11:00 a.m.  
ANSI/AIHA ASC Officers Meeting  
OCC, VIP Suite D

Noon-1:00 p.m.  
Violet Council Meeting  
OCC, E142

1:00 p.m.-3:00 p.m.  
Academic SIG Meeting  
OCC, E141

ANSI/AIHA Z9 Ventilation System Standards Committee Meeting  
OCC, E143

Consultants SIG Business Meeting  
OCC, E144

Incident Preparedness and Response Working Group Meeting  
OCC, E148

Indoor Environmental Quality SIG Meeting  
OCC, E147

Noise Committee Meeting  
OCC, E146

3:30 p.m.-5:30 p.m.  
Control Banding Working Group Meeting  
OCC, E144

Environmental Issues SIG Meeting  
OCC, E147

Ergonomics Committee Meeting  
OCC, E146

4:00 p.m.-6:00 p.m.  
ANSI/AIHA Z88 Respiratory Protection Standards Committee Meeting  
OCC, E148

Fellows SIG Meeting  
Hilton, Grand Ballroom II

Permanent Conference Committee Meeting  
OCC, E143

6:30 p.m.-8:00 p.m.  
AIHA President’s reception (by invitation)  
The Nines, Ballroom

Ancillary

9:00 a.m.-11:00 a.m.  
Industrial Hygienists Without Borders  
OCC, E148

1:00 p.m.-5:00 p.m.  
28th Annual Pharma Forum sponsored by Patheon  
Crowne Plaza, Bellmont Ballroom

1:30 p.m.-5:00 p.m.  
Forest Products Industrial Hygiene Forum sponsored by NCASI  
Hilton, Studio Suite

American Petroleum Institute (API) Workshop for Oil and Natural Gas Participants  
Hilton, Pavilion Ballroom

3:00 p.m.-6:00 p.m.  
American Association of Railroads (AAR) Railroad Industrial Hygiene Forum  
Hilton, Broadway II

5:00 p.m.-7:30 p.m.  
AIHA Chicago Local Section AIHCE Reception  
Jake’s Grill Restaurant, 611 SW 10th Avenue

5:30 p.m.-7:30 p.m.  
University of South Florida Reception  
Hilton, Directors Suite
GENERAL SESSION

8:00 a.m.–9:00 a.m.
OCC, Portland Ballroom

OSHA: Initiatives, Challenges, Directions

David Michaels, PhD, MPH
Assistant Secretary of Labor
OSHA
Washington, DC

Under the leadership of Dr. David Michaels, OSHA has launched new initiatives and made significant progress. Hear OSHA’s plans for the future and current initiatives articulated and learn how they may affect your practice of occupational and environmental health and safety.

Dr. Michaels will hold an Ask the Expert session from 10:00 a.m.–11:30 a.m. in room B119.

This general session is sponsored by

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CR 314

Construction Noise: Managing Community Expectations

10:00 a.m.–11:00 a.m. + OCC, B113

Presenter: B. Pittman, CH2M HILL, Salem, OR; S. Mader, CH2M HILL, Portland, OR.
Moderator: D. Johnson, SAIF Corporation, Salem, OR. Monitor: R. Brauch, Casella CEL, Inc., Amherst, NH.

Currently, cities and states have a diversity of community noise regulations that impact large scale highway/bridge construction. Frequently, the challenges and constraints of managing construction noise are not addressed in pre-bid documents. This presentation will review the impacts of community noise regulations and discuss the methods used to manage construction noise on four major highway/bridge projects. Important issues to address prior to construction, including the identification of impacted communities and requirement for variances, will also be discussed.

CR 315

OSHA Local and National Emphasis Program Inspections — How Companies Can Get Prepared

10:00 a.m.–11:00 a.m. + OCC, B110

Presenter: M. Taylor, Arent Fox LLP, Washington, DC.

Every year, the Occupational Safety and Health Administration conducts approximately 20,000 national and local emphasis program inspections at various work sites across the country. OSHA currently has several national emphasis programs focusing on the chemical industry, combustible dust, flavoring chemicals/diacetyl, hazardous machinery, lead, nursing, petroleum refineries, recordkeeping, shipbuilding, silica, and trenching and excavation. OSHA also has 140 local emphasis programs. National and local emphasis programs are tools in which the agency can maximize resources by focusing on specific hazards or industries.

Ask the Expert

With Dr. David Michaels, PhD, MPH

10:00 a.m.–11:30 a.m. + OCC, B119

Moderator: A. Fleeger, ExxonMobil Corporation, Houston, TX.

PO 119

All Things Radiation

10:00 a.m.–Noon + OCC, B136


10:00 a.m.

Laser Safety Program at Woods Hole Oceanographic Institution. (PO 119-1) R. Reif, Woods Hole Oceanographic Institution, Woods Hole, MA.

10:20 a.m.

Wednesday, May 18

WD 503

Monitoring and Control

9:00 a.m.–1:00 p.m. + OCC, A108

Arrangers and Moderators: M. Harper, NIOSH, Morgantown, WV; P. Görner, INRS, Vandoeuvre, France. Monitor: S. Kim, NIOSH, Morgantown, WV.

9:00 a.m.

Sampling Efficiency of Inhalable Wood Dust Samplers. (WD 503-1) P. Görner, X. Simon, R. Wrobel, INRS, Vandoeuvre, France.

9:20 a.m.


9:40 a.m.

Comparison of Personal Samplers for Wood Dust Sampling. (WD 503-3) T. Lee, M. Harper, J. Slaven, NIOSH, Morgantown, WV.

10:00 a.m.

Use of Mid-Infrared Diffuse Reflection for Estimation of Wood Dust Exposure. (WD 503-4) M. Chirila, M. Harper, NIOSH, Morgantown, WV.

10:40 a.m.

Peak Exposure to Wood Dust at Production of Wood Pellets — How Much Do They Contribute to the Exposure? (WD 503-5) K. Hagström, H. Arvidsson, I. Bryngelsson, Department of Occupational and Environmental Medicine, Örebro, Sweden; E. Andersson, Department of Occupational and Environmental Medicine, Göteborg, Sweden; K. Eriksson, Department of Occupational and Environmental Medicine, Umeå, Sweden.

11:00 a.m.

Wood Dust and Formaldehyde. (WD 503-6) H. Gill, University of British Columbia, Vancouver, BC, Canada.

11:20 a.m.

Dust Collection Performance Evaluation of Portable Woodworking Machines. (WD 503-7) J. Fontaine, INRS, Vandoeuvre, France.

11:40 a.m.

Construction Solutions Database. (WD 503-9) J. Le, J. Platner, CPWR — The Center for Construction Research and Training, Silver Spring, MD.

Symposium Sponsors

AIHA
American Forest & Paper Association

Symposium Co-Chairs:
+ Dr. Martin Harper, CIH, NIOSH
+ Dr. Peter Görner, INRS (France)

PO 120

Alternate Exposure Assessment Strategies

10:00 a.m.–Noon + OCC, Oregon 202

Arranger: M. Vadali, University of Minnesota, Brooklyn Park, MN. Moderator: C. Simmons, ENVIRON International Corporation, Chicago, IL. Monitors: P. Middendorf, NIOSH, Cincinnati, OH; S. Arnold, EHS LLC, Roswell, GA.

10:00 a.m.

Comparison of a Two-Zone (Near Field-Far Field) Exposure Model with Computational Fluid Dynamics (CFD) and Spatial Concentration Distributions Measured in a Simulation Chamber to Estimate Breathing Zone Concentrations and Bystander Exposure Factors. (PO 120-1) D. Hall, C. Strode, E. Rasmuson, J. Rasmuson, Chemistry & Industrial Hygiene, Inc., Wheat Ridge, CO.

10:20 a.m.

A Comparison on the Characteristics of Benzene Exposure Between the Coal Chemical and Petrochemical Refining Method During Turnaround. (PO 120-2) E. Chung, Korea Occupational Safety and Health Agency, Incheon, Republic of Korea.

Celebrate the 40th Anniversary of the OSH Act

Sign the Anniversary Card!

AIHce 2011 is celebrating the 40th Anniversary of the OSH Act, which created OSHA and NIOSH. Special recognition will occur during the Wednesday General Session, which includes a keynote presentation by OSHA Director, Dr. David Michaels. Show your support for the OSH Act by signing the specially created anniversary card in the Lobby. We are hoping to get thousands of signatures, so please stop by and sign the card!
10:40 a.m.  
Validation of the USEPA Integrated Exposure Uptake Biokinetic Model (IEUBK) at High Levels of Lead Exposure among Children Living Near an Active Lead Smelter in Shymkent, Kazakhstan.  
11:00 a.m.  
Design and Execution of an MDI Exposure Assessment: Lessons Learned and a Brief Comparison of Two Analytical Methods — OSHA 47 and Izochek.  
(PO 120-4) M. Hutchinson, G2 Consultants, Inc., Lake Oswego, OR.  
11:20 a.m.  
Determining Particulate Containment Through Surrogate Monitoring at Pharmaceutical Companies in India.  
11:40 a.m.  
New Basis for Interpreting Historical Exposures to Dust from Chrysotile-Containing Joint Compound.  
(PO 120-6) P. Sheehan, G. Brorby, K. Bogen, Exponent, Oakland, CA; W. Berman, Aeculus, Inc., Albany, CA; S. Holm, Georgia-Pacific LLC, Atlanta, GA.  

RT 230  
A Conceptual Discussion of Safety and Health Implications for the Workplace  
10:00 a.m.—Noon + OCC, B116  
Arranger: K. Slates, Indiana University, Bloomington, IN.  
Mentor: L. Goodridg, Chevron, Covington, LA.  

The minority special interest group (SIG) is pleased to sponsor the following roundtable. We hope that our topics encourage meaningful dialogue and debate that will raise questions and challenge our assumptions as they relate to contemporary issues in occupational safety and health. The following roundtable speakers Dr. Samuel Oyewole, Dr. Leza Brown, and Larry Newton CSP, CIH, and Julius Rhodes have distinguished themselves as subject matter experts in academia, industry and government. The panel discussion format will lead conceptual discussions and encourage audience participation on the following topics:  

- Mentoring minorities in the field of safety and health: Is there a need?  
- What organizational variables contribute to safety performance?  
- Safety leadership and resource allocation: Illness and injury disparities: Do injury and illness disparities exist? If so where and what can be done about it?  
- Healthy Homes: What effect can social determinates have on safety and health outcomes in low income housing?  

- An Examination of Psychosocial Stresses and Occupational Injuries and Illnesses in Hispanics and African Americans.  
L. Brown, Illinois State University, Normal, IL.  
- Healthy Homes: Residential Safety and Health Hazards and At-risk Populations.  
K. Slates, L. Newton, Indiana University, Bloomington, IN.  
- Cultivating the Future: Leadership and Mentoring in the EHS Profession.  
J. Rhodes, SPHR, Chicago, IL.  
S. Oyewole, Penn State University, PA.  
- Safety Leadership.  
D. Hill, ABB Inc., Southfield, MI.  

RT 231  
American Board of Industrial Hygiene Forum  
10:00 a.m.—Noon + OCC, D139  
Arranger and Moderator: L. O’Donnell, ABIH, Lansing, MI.  
Monitors: R. Drafta, B. Snow, ABIH, Lansing, MI.  

How do you become a Certified Industrial Hygienist? Once certified, how do you maintain your certification? ABIH Board members and staff will present information on certification topics, address comments and questions from the audience and seek audience input on ABIH’s direction and programs.  

RT 232  
Ethical Decision Making in Sustainability and Management Systems  
10:00 a.m.—Noon + OCC, F152  
Arranger and Moderator: J. Baker, ERM Inc., Exton, PA.  
Monitors: L. Barnes, Bureau Veritas North America, Inc., Lakewood, CO; M. Johnson, IHS, Englewood, CO.  

Competitive pressures on EHS professionals from customers, clients, government, internal management, and specific interests may present situations that test our capabilities around ethical decision-making. Through case studies and discussion, this roundtable examines the meaning of “ethics in business,” ethical behavior as a foundation of management systems, ethical lapses in environmental data reporting, and the future of ethics for EHS professionals in the global business setting of the 21st century.  

- The Grammar of Ethics and the Dynamics of Sustainability Management.  
E. Quevedo, Paladin Law Group, LLP, Walnut Creek, CA.  
- Ethical Decision Making in Setting Global EHS Standards.  
A. Leibowitz, ITT Corporation, White Plains, NY.  
- Dealing Ethically with Sensitive Information in Management System Auditing.  
T. Dunmire, ENLR Compliance Services, Largo, FL.  
- Impacts of Personal Ethical Behavior on the Sustainability of Management Systems.  
G. Barbi, BD, Franklin Lakes, NJ.  

RT 233  
Incorporating Life Cycle Analysis in Business: Opportunities for the EHS Professional  
10:00 a.m.—Noon + OCC, A106  
Arranger and Moderator: D. Martin, Pacific Biosciences, Menlo Park, CA.  

The practice of Life Cycle Assessment (LCA) uses a comprehensive method to analyze environment and health (EHS) impacts of products and processes. With the growing focus toward sustainability businesses are expected to be more transparent regarding their strategies to lessen their impacts. The LCA approach is increasingly being used by businesses for a wide variety of uses including: support of environmental claims, comparing products, assessing carbon footprints, and to lessen impacts associated with process and production. This session will aim to provide an overview of the LCA process and tools used for analysis. The session will also illustrate business case studies and will highlight the important role of the EHS professional in the process.  

- Introduction to Life Cycle Analysis.  
C. Kral, WSP Group, San Francisco, CA.
RT 234
Risk Assessment Applied to Engineered Nanomaterials: Managing Risk with Limited Data
10:00 a.m.–Noon + OCC, Oregon 201
Arranger and Moderator: C. Laszcz-Davis, The Environmental Quality Organization, Lafayette, CA. Monitors: G. Dotson, NIOSH, Cincinnati, OH; B. Stockmeier, Argonne National Laboratory, Argonne, IL.

The manufacture and use of engineered nanomaterials raises the same types of issues and questions relative to the potential impact on human health presented by many new emerging technologies. Traditionally, industrial hygiene professionals rely on the results of quantifiable human health risk assessments to develop and implement risk management programs. The general role, concepts and tools of human health risk assessment remain relevant and operational in the evaluation of engineered nanomaterial risk; however, currently there are considerable gaps in our knowledge of the variables for quantifying risk assessment of these materials. This roundtable will focus on the issues and elements involved in developing risk assessment and identify and characterize the major knowledge gaps. Roundtable panel representatives include national leaders in their respective fields and will focus on what is known about nanomaterial toxicity, exposure assessment and hazard analyses, and will discuss risk management decision-making when the information needed for quantitative risk assessment is limited. This roundtable will provide the industrial hygienist with the current state of risk assessment knowledge on toxicity and exposure assessment of engineered nanomaterials.

PO 121
Case Study Methodologies for Skin and Respiratory Exposures
10:00 a.m.–12:20 p.m. + OCC, Oregon 204

10:00 a.m.
Chemical Occupational Asthma: Is Skin Exposure the Missing Piece of the Puzzle? (PO 121-1) T. Morris, Morris Innovative IH&S Solutions, Cincinnati, OH.

10:20 a.m.

10:40 a.m.
Development of Method and Preliminary Field Results for Measurements of Skin Exposure During Secondary Water Contact Recreation. (PO 121-3) S. Cali, D. Das, J. Piatek, R. Lopez, S. Dowd, P. Scheff, University of Illinois at Chicago, Chicago, IL.

11:00 a.m.
Using Qualitative Exposure Assessment for Occupational Contact Dermatitis. (PO 121-4) A. Sussell, NIOSH, Cincinnati, OH.

11:20 a.m.
Allergic Contact Dermatitis (ACD): How Should We Evaluate Sensitizer Exposures? (PO 121-5) T. Morris, Morris Innovative IH&S Solutions, Cincinnati, OH.

11:40 a.m.
Comparison of Simulated vs. Actual Worker Exposures to airborne BFRs. (PO 121-6) C. Torres, ENVIRON International Corporation, Monument, CO; M. Buckalew, ENVIRON International Corporation, Atlanta, GA.

PO 122
International Globalization
10:00 a.m.–12:20 p.m. + OCC, F149

10:00 a.m.
Best Practices for Chemical Management in a Computer-Driven Age — Case Studies. (PO 122-1) K. Kawar, Actio Corporation, Naperville, IL.

10:20 a.m.
Exposure of Egyptian Cotton Workers to the Pesticide Chlorpyrifos. (PO 122-2) K. Galvin, R. Fenske, University of Washington, Seattle, WA; F. Farahat, Menoufia University, Shibin el Kom, Egypt.

10:40 a.m.
Health Hazard Evaluation of the Princess Margaret Hospital in Nassau, the Bahamas. (PO 122-3) T. Niemeier, NIOSH, Cincinnati, OH; M. Kiefer, NIOSH, Denver, CO.

11:00 a.m.
Things Behind the Occupational Safety Accidents of Coal Mining Industry in China. (PO 122-4) X. Liu, Saint Louis University, St. Louis, MO.

11:20 a.m.
Case Study: Using the GHS Transition Checklist to Ensure Global Regulatory Compliance. (PO 122-5) L. Seguin, KMK Regulatory Services Inc., Blainville, QC, Canada.

11:40 a.m.
Abu Dhabi EHSMS — World’s First Integrated Regulatory System. (PO 122-6) C. Sall, Abu Dhabi EHS Center, Abu Dhabi, United Arab Emirates.

Noon
PO 123
Environmental Issues for Industrial Hygienists
10:00 a.m.–12:40 p.m. + OCC, Oregon 203
10:00 a.m.
Rachel Carson Award. E. Erikson, Guida, Slavich & Flores,Dallas, TX.
10:20 a.m.
10:40 a.m.
Analysis of Air Quality Data from a Fixed Monitoring Site for Implications for a Nearby Coast Guard Facility. (PO 123-2) L. Whitehead, T. Stock, L. Pompeii, NOAA ORR, Seattle, WA.
11:00 a.m.
Now, What’s That Smell? Challenges of Community Odor Evaluation. (PO 123-3) E. Shamberger, Bureau Veritas North America, Akron, OH.
11:20 a.m.
Deepwater Horizon Response — Redefining ICS and the Safety Officer’s Role. (PO 123-4) L. Hartline Weems, U.S. Coast Guard, Washington, DC.
11:40 a.m.
NOAA’s Office of Response and Restoration Response to the Deepwater Horizon Spill: Safety Challenges and Lessons Learned. (PO 123-5) N. Barnea, NOAA ORR, Seattle, WA.
Noon
Evaluating Workers’ Potential Asbestos Exposure During Handling, Installation, Curtting, Sanding and Cleanup of Vinyl Asbestos Floor Tile. (PO 123-6) A. Bilenski, L. Burrelli, J. Spencer, Environmental Profiles, Inc., Columbus, MD.
12:20 p.m.

PO 124
Respiratory Protection II
10:00 a.m.–12:40 p.m. + OCC, C121
10:20 a.m.
Performance of Conventional and Antimicrobial-Treated Filtering Facepiece Respirators Against Viable Influenza Virus A. (PO 124-1) N. McCullough, J. Sebastian, A. Viner, 3M Company, St. Paul, MN; M. Lore, T. Brown, S. Hinrichs, University of Nebraska, Omaha, NE.
10:40 a.m.
11:00 a.m.
Workplace Protection Factors for Two Types of N95 Respirators Used on Farms for Respiratory Protection Against Bioaerosols. (PO 124-3) K. Cho, T. Reponen, R. McKay, A. Adhikari, U. Singh, A. Dwivedi, R. Shukla, S. Grinshpun, University of Cincinnati, Cincinnati, OH; S. Jones, G. Jones, Western Kentucky University, Bowling Green, KY.
11:20 a.m.
Physiologically Based Pharmacokinetic (PBPK) Modeling for Evaluating the Effect of Molar Absorption of Vapors on the Measurement of Workplace Protection Factors (WPFs). (PO 124-4) W. Groves, B. Pullampally, Penn State University, University Park, PA.
11:40 a.m.
Field of View of Commercial Air-Purifying Respirators. (PO 124-5) K. Coyne, D. Barker, U.S. Army, Aberdeen Proving Ground, MD; T. Rice, Science Applications International Corporation, Abingdon, MD; B. Elmore, Aberdeen High School, Aberdeen, MD.
Noon
Ultrasonic for in situ Estimation of Respirator Fit. (PO 124-6) W. King, J. Szalajda, NIOSH, Pittsburgh, PA.
12:20 p.m.
Exposure Assessment Associated with the Use of Respirators. (PO 124-7) C. Manning, Assay Technology, Livermore, CA.

CR 316
PSM, RMP and CalARP Update and Resources for Employers
11:30 a.m.–12:30 p.m. + OCC, B113
These three federal and state OSHA/EPA regulations (PSM, RMP, and CalARP) continue to be burdensome and expensive for employers. At $32,500 fines/location/day, these regulations will challenge EHS professionals to maintain compliance. With the recent BP incident, industries that were once exempt from these regulations are slowly having their exemptions removed. This includes fertilizer, combustible gas, and propane distributors. This is a “must-attend” presentation to keep you abreast of the regulatory updates and requirements.

Exhibitor Product Demos and Presentations
Noon–1:00 p.m. + Expo Theater, Hall D
Nun
Gasmet Model DX-4030, World’s First Truly Portable FTIR Multi-Component Gas Analyzer, Gasmet Technologies Inc.
The Gasmet Model DX-4030 measures 25 gases simultaneously at sub-ppm detection levels in one field, rugged and user-friendly package. For Hazmat applications, the DX-4030 Analyzer provides the ability to identify “unknown” gases by searching the NIST/EPA library of over 5,000 gases. This can be performed within just minutes after arriving at the incident site. Applications include monitoring: (1) VOCs, i.e., Acrolein, Acetone, Acetals, Benzene, Toluene, Diacetate; (2) Toxic Gases such as HCl, HF, Ammonia, Phosphine, TICs and CWAs; (3) Hospital Gases including waste Anesthetics (Wags), Formaldehyde, Hydrogen Peroxide and Ethylene Oxide; (4) Contaminated waste sites monitoring for Chlorinated Hydrocarbons such as PERC, TCE, DCM or aromatic H/Cs.
12:30 p.m.
GrayWolf’s AdvancedSense™ Meter; Innovative IH/IAQ Data Collection, GrayWolf Sensing Solutions
GrayWolf introduces the cutting-edge AdvancedSense environmental meter (w/embedded computer) to record data and on-site observations reliably and efficiently. Measure a broad range of IH and IAQ parameters, including VOCs, Carbon Dioxide, Particulate, Airflow, Differential Pressure, Ozone, H2S, %RH and more. This presentation will show some of this meter’s powerful productivity tools that enable simple, well-documented data collection; the addition of audio, text and video notes, attached right to the data files; and easy report generation.

Luncheon Discussions
Volunteer Group "Tech Talks"
Noon–1:00 p.m. + OCC, Expo, Hall D
Luncheon Discussions are small, highly interactive group discussions facilitated by representatives from various AIHA Volunteer Groups. The topics presented reflect current trends and high-interest, relevant issues from each Volunteer Group’s technical content. Purchase lunch and select a discussion—seating is first-come, first-served.

1. ANSI/AIHA® Standards—Z10, Z88, Z9
Moderators: J. Howe, Medford, OR; J. Johnson, JSJ and Associates, Pleasanton, CA; and J. Price, Northeastern University, Boston, MA.

2. Biosafety and Environmental Microbiology Committee
Moderator: R. Strode, Chemistry & Industrial Hygiene, Inc. (C&IH), Denver, CO.

3. Clandestine Laboratory Working Group
Moderator: J. Devalois, KEMWest, Inc., Denver, CO.

4. Communication and Training Methods Committee
Moderator: D.C. Breeding, Texas A&M University, College Station, TX.

5. Computer Applications Committee
Moderator: K. Diep, American Airlines, Fort Worth, TX.

6. Confined Spaces Committee
Moderators: C. Clarke, Ascend Performance Materials, Pensacola, FL; B. Rush, IHI Environmental, Salt Lake City, UT; E. Willwerth, AE&MS, Inc., Grafton, MA.

7. Construction Committee
Moderator: R. Suga, Bechtel Jacobs LLC, Oak Ridge, IL.

8. Control Banding Working Group and Nanotechnology Working Group
Advances in Control Banding to Anticipate, Recognize, Evaluate, Control, and Confirm Worker Safety and Health
Moderators: D. Heidel, T. J. Lentz, NIOSH, Cincinnati, OH; M. Hoover, NIOSH, Morgantown, WV.

9. Environmental Issues Committee
Moderator: F. Eriksen, Guida, Slavich, & Flores, P.C., Dallas, TX.

10. Ergonomics Committee
Moderator: C. Brigham, iSource Safety and Health, Inc., Exton, PA.

11. Green Building Working Group
Moderator: L. Nguyen Weeks, InAIR Environmental Ltd., Ottawa, ON; N. Sanders, AQ5-BC, Marietta, GA.

12. Healthcare Working Group
Moderator: S. Derman, MediShare Environmental Health & Safety Services, Cupertino, CA.

13. Indoor Environmental Quality Committee
Moderators: L. Albin, Purdue University, West Lafayette, IN; W. Baker, Michaels Engineering, La Crosse, WI; D. Kahane, Forensic Analytical, CA.

14. International Affairs Committee
Moderator: M. Levinsky, ECOH Management Inc., Mississauga, ON.

15. Ionizing Radiation
Moderators: B. Gallagher, Applied Health Physics Inc., Bethel Park, PA; R. Johnson, Dade Moeller Inc., Gaithersburg, MD.

16. Laboratory Health and Safety Committee
Moderator: L. Poore, University of Kentucky, Lexington, KY.

17. Management Committee
Moderator: G. Miller, MM&A LLC, Matthews, NC.

18. Noise Committee
Moderators: R. Brauch, Casella USA, Amherst, NH; L. Hager, 3M, Portland, MI.

19. Non-Ionizing Radiation Committee
Moderator: D. Baron, IEEE, Austin, TX.

20. Occupational Epidemiology
Moderator: T. Armstrong, TWASHR Occupational Hygiene Consulting, LLC, Branchburg, NJ.

21. Real-Time Detection Systems Committee
Moderator: T. Engel, J. Golden, 3M, St. Paul, MN.

22. Respiratory Protection Committee
Is Your Respirator Program OSHA Compliant?
Moderator: J. Johnson, JSJ and Assoc., Pleasanton, CA; J. Parker, S. Rengasamy, NIOSH, Pittsburgh, PA.

23. Risk Assessment Committee
Moderator: W. Beadie, Maul, Foster and Alongi, Portland, OR.

24. Safety Committee
Moderator: S. Eversmeyer, Port of Portland, Portland, OR.

25. Sampling and Laboratory Analysis Committee
Recent Advances in Passive Sampling
Moderator: M. Eide, Retired, Boise, ID.

26. Social Concerns Committee
Suicides and Cancers in Asian Electronics Factories

27. Stewardship and Sustainability Committee
Product Stewardship Registry and other Committee Initiatives
Moderator: D. Deeds, Industrial Health & Safety Consultants, Inc, Woodbridge, CT; K. Thompson, 3M, St. Paul, MN.

28. Toxicology Committee
Moderator: R. Larson, University of Utah, Salt Lake City, UT.

29. Workplace Environmental Exposure Levels
Occupational Exposure Limits Comparisons
Moderator: A. Weinrich, EPA, Cincinnati, OH.

Cummings Award Lecture
A Romanian Odyssey in Occupational Hygiene
12:30 p.m.–1:30 p.m. + OCC, D136
Lecturer: Dr. Roy M. Buchan, CIH
Professor Emeritus, Colorado State University
This lecture was written to celebrate and honor one of the pioneers of Occupational Hygiene, Donald Cummings, the third president of AIHA. Donald Cummings was a man of vision and integrity whose life was cut short at age 42 by an airplane crash while en route to a mining operation in Nevada. When he, along with the other pioneers such as F. Holden, W. Yant, P. Parry, W. Fredrick and C. Poole set about the formation of AIHA, they illustrated integrity and foresight, although I wonder if they had any idea how large the association would become and how...
Acquisition to Integration as Part of a Management System

CR 317

1:00 p.m.–2:00 p.m. + OCC, D138

This presentation will explain the acquisition and integration process that was developed and improved within ITT Corporation. We will cover the success and failures experienced during recent acquisitions, and the importance of ESH being involved in the acquisition process from the very beginning. Acquiring and integrating another company while using a defined Management System allows a company to accurately gauge the environmental, safety and health risk associated with the acquisition, and appropriately define the controls needed to manage the risk.

CR 318


1:00 p.m.–2:00 p.m. + OCC, D139
Presenter: P. Zoubek, Zoubek Consulting, LLC, San Diego, CA.

ANSI B11.TR3 is a globally recognized standard for quantitative machine safeguarding risk assessment. In 2008, ANSI published B11-2008, which provides guidance on achieving acceptable risk (or that level at which further risk reduction would not result in significant reduction in risk). This presentation outlines how to perform a machine safeguarding risk assessment using the ANSI.B11.TR3 method and apply ANSI B11-2008 in order to achieve acceptable risk. Participants will perform a hands-on assessment utilizing the ANSI B11 Risk Assessment Method.
Absence of a competent person is one of the most frequently cited violations by OSHA. OSHA regulations ranging from “Asbestos” to “Steel Erection” establish the requirement for employers to designate a competent person. While OSHA defines the competent person as one who is capable of identifying existing and predictable hazards and authorized to take prompt corrective measures to eliminate those hazards, this definition leaves a lot of room for interpretation. Some regulations, such as the “Asbestos in Construction” (1926.1101), provide specific training requirements. Other regulations, such as “Excavations” (1926.650) are silent about training or skills needed by competent persons. Lack of specificity undercuts the value of the competent person concept, and leads to wide variation in training designated as “competent person training.” How do EHS professionals determine the basic qualifications for a competent person versus a trenching or scaffold erection contractor? What about OSHA? Is someone a CP per OSHA if nothing bad happens at a job site, but incompetent if something bad happens? What are the qualifications you want to see, how would you know someone is qualified to be your CP? Roundtable speakers will address these questions as they review the role of the competent person and provide criteria to implement effective competent person programs.

- Developing Competency Objectives for Silica Competent Persons: Report on an AIHA Construction Committee Workgroup Effort. M. Gillen, NIOSH, Washington, DC.
- Critical Qualities and Authorities for the Competent Person — A Compliance Perspective. M. Wood, Oregon Occupational Safety and Health Administration, Salem, OR.

**RT 236**

**Emerging Technologies: OSHA’s Approach, Activities, and Audience Exchange**

*1:00 p.m.–3:30 p.m. + OCC, Oregon 203*

**Arranger:** C. Jones, OSHA, Washington, DC. **Moderator:** T. Galassi, OSHA, Washington, DC. **Monitors:** R. Fairfax; M. Hatch, OSHA, Washington, DC.

The occupational safety and health concerns related to emerging technologies and industries are not well defined or well characterized. While important to innovation and to technological and economic growth, these new technologies and industries can and frequently do pose serious risks to workers. While OSHA has always monitored new and emerging workplace hazards as part of its mission, the agency is now taking a more active role in exploring unique, non-regulatory actions it can take to address these risks in the workplace. OSHA discusses its agency-wide approach to identifying, monitoring, and taking action on emerging technologies and industries. It also outlines recent activities related to several emerging technologies and industries including nanotechnology, green jobs, and butter flavoring substitutes. Finally, OSHA opens the discussion to interested audience members to exchange information about emerging issues in their workplace and steps the agency can take to address them.

- Identifying and Addressing Workplace Issues with Emerging Technologies and Industries at OSHA. C. Jones, OSHA, Washington, DC.
- Nanotechnology — A Unique Conundrum in OH&SE. J. Carter, OSHA, Cincinnati, OH.
- Making Green Jobs Good Jobs — We All Want To, So What is OSHA Doing to Make it Happen? S. Kanth, OSHA, Washington, DC.
- Butter Flavoring Substitutes — Not Really the Answer to Diacetyl. A. Profitt, OSHA, Washington, DC.
- Now to You — Audience Thoughts on OSHA’s Approach and Initiatives. C. Jones, OSHA, Washington, DC.

**RT 237**

**Making Changes: Embracing an Uncertain Future and Thriving**

*1:00 p.m.–3:30 p.m. + OCC, F152*

**Arranger and Moderator:** C. Hovde, Caterpillar Inc., Roseville, MN. **Monitors:** L. Vivekanand, GE Global Research, Niskayuna, NY; C. Hanko, Marathon Oil, Findlay, OH.

Life and careers are unpredictable. Changes in personal life, industry, and business climate mean that industrial hygienists may need to make changes they never expected. This roundtable will openly discuss potential changes and provide practical advice on how to prepare for them. Speakers will give examples from their own experiences and provide practical tips on what education, networking, and management skills could make those changes/transitions smoother. This session will include a presentation on preventing burnout, which is common to any career field.

- Have You Ever Thought About Making a Switch into or Out of Consulting? T. Blodgett, Target, Minneapolis, MN.
- So, You Are Thinking About Academia? R. Anthony, University of Iowa, Iowa City, IA.
- Midlife Career Change. M. Harris, Hamlin & Harris, Inc., Baton Rouge, LA.
- Apathy Has Rained on Me — Preventing Burnout Before Arriving Here. D. Brown, 3M Company, St. Paul, MN.

**RT 238**

**Using Computer Applications to Demonstrate the IH Business Case as Part of the Value Strategy**

*1:00 p.m.–3:30 p.m. + OCC, C121*

**Arranger:** M. Melkonian, Medgate, Inc., Salem, OR. **Moderator:** K. Diep, American Electric Power, Dallas, TX. **Monitors:** M. Bergner, Crawford, St. Paul, MN; K. Hawkins, American Electric Power, Dallas, TX.

Industrial hygienists play a critical role within organizations to ensure the health and safety of workers and the general public. Many times it can be difficult to quantify for management the true value you provide to your organization. This session will present success stories and useful tips to help prove the value of industrial hygiene through computer applications.
### PO 126

**Reconstruction of Exposures:**

**Methods and Application**

1:00 p.m.–3:40 p.m. + OCC, B113

**Arranger and Moderator:** S. Maberti, ExxonMobil, Houston, TX.

**Monitors:** J. Couch, NIOSH, Cincinnati, OH; F. Dopart, Johns Hopkins University, Baltimore, MD.

**1:00 p.m.**

Comparison of Three Methods of Retrospective Exposure Assessment in a Case-Control Study of Chronic Beryllium Disease. (PO 126-1) M. Van Dyke, L. Maier, M. Mroz, L. Silveira, J. Martyny, National Jewish Health, Denver, CO; M. Rutenber, Colorado Department of Public Health and Environment, Denver, CO; S. Reynolds, Colorado State University, Fort Collins, CO.

**1:20 p.m.**

Development of Job Exposure Matrices for the Pre-1974 Vinyl Chloride Industry. (PO 126-2) L. Dell, K. Mundt, ENVIRON International Corporation, Amherst, MA; C. Torres, ENVIRON International Corporation, Atlanta, GA; R. Adams, ENVIRON International Corporation, Princeton, NJ.

**1:40 p.m.**

Retrospective Exposure Assessment in the Specialty Chemical Research Facility. (PO 126-3) Y. Chen, G. Ramachandran, B. Alexander, J. Mandel, University of Minnesota, Minneapolis, MN.

**2:00 p.m.**


**2:20 p.m.**

Long-Term Exposure to Occupational Dust and Major Causes of Death in Chinese Workers. (PO 126-5) W. Chen, Y. Liu, H. Wang, S. Weng, J. Chen, T. Wu, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, China; E. Hnido, F. Hearl, NIOSH, Morgantown, WV; Y. Sun, F. Bochmann, Institute for Occupational Safety and Health of German Social Accident Insurance (IFAO), Sankt Augustin, Germany; X. Zhang, Jingdezhen Health Bureau, Jingdezhen, China.

**2:40 p.m.**

Exposure-Response over Time and Lifetime Risk of Silicosis — Regulatory Risk Assessment of Silicosis Among a Cohort of Chinese Pottery Workers. (PO 126-6) F. Bochmann, Y. Sun, IFA-DGUV, Sankt Augustin, Germany; W. Chen, Huazhong University of Science and Technology, Wuhan, China.

**3:00 p.m.**

Cardiopulmonary Mortality and Long-Term Exposure to Occupational Dust: A Cohort Study. (PO 126-7) Y. Liu, W. Chen, Huazhong University of Science and Technology, Wuhan, China; K. Steenland, Emory University, Atlanta, GA.

**3:20 p.m.**

COPD in Construction Workers: Results from Two Medical Monitoring Programs. (PO 126-8) J. Dement, Duke University, Durham, NC; L. Welch, Center for Construction Research and Training (CPWR), Silver Spring, MD; K. Ringen, Stoneturn Consultants, Seattle, WA.

**PO 127**

**New Issues in Biological and Chemical Sampling and Analysis**

1:00 p.m.–4:00 p.m. + OCC, B119

**Arranger and Moderator:** A. Teague, Analytics Corporation, Ashland, VA.

**Monitors:** S. VanEtten, EMSL Analytical, Cinnaminson, NJ; M. Eide, retired, Murray, UT.

**1:00 p.m.**

Concentration Factor as a Function of Particle Size and Sampling Flow Rate for the Virtual Impactor of the XMX/2L-MIL Biological Air Sampler. (PO 127-1) J. Black, U.S. Air Force, Wright-Patterson AFB, OH; C. Cooper, J. Slagley, School of Aerospace Medicine, Wright-Patterson AFB, OH.

**1:20 p.m.**

The Influence of Air Volume on Pungal Spore Viability: A Comparison of Four Bioaerosol Samplers. (PO 127-2) M. Salch, University of Toronto, Toronto, ON, Canada.

**1:40 p.m.**

Validations of the Dynamic Air Sampling Method for Microbial Volatile Organic Compounds (MVOCs) by Solid-Phase Microextraction (SPME) with the Co-Exist of BTEx. (PO 127-3) I. Wang, Y. Chen, S. Tsai, National Taiwan University, Taipei, Taiwan.
These challenges included not only the health and safety challenges that it would face following the collapse of the twin towers. In addition, faced but also about some of the ensuing decade, much has been learned not only about the exposures that the responders faced but also about some of the ensuing health effects suffered by them. In addition, specialized training programs and monitoring devices have been developed by various entities for similar disaster scenarios.

This year marks the 10th anniversary of the terrorist attacks on the World Trade Center and the Pentagon. The industrial hygiene community was largely unprepared for the health and safety challenges that it would face following the collapse of the twin towers. These challenges included not only monitoring the first responders but also extended into the process of reclaiming the surrounding buildings. Within days of the attacks, the EPA reported that the air was safe to breathe even though the characterization of the dust created by the collapses was still only in its preliminary stages. It was not until over a year later that an official document was put out by the World Trade Center Indoor Air Taskforce Working Group identifying “contaminants of potential concern” along with suggested clearance criteria. In the ensuing decade, much has been learned not only about the exposures that the responders faced but also about some of the ensuing health effects suffered by them. In addition, specialized training programs and monitoring devices have been developed by various entities for similar disaster scenarios.

+ Community Exposures and Health Issues Related to the World Trade Center Disaster. L. Chen, New York University, Tuxedo, NY.
+ Managing the Fatigue of Disaster Workers: Lessons Applied from WTC. B. Lippy, The Lippy Group, LLC, Baltimore, MD.

RT 239
10 Years Later: What Have We Learned from the WTC Attacks?
1:00 p.m.–4:00 p.m. + OCC, Oregon 202

This year marks the 10th anniversary of the terrorist attacks on the World Trade Center and the Pentagon. The industrial hygiene community was largely unprepared for the health and safety challenges that it would face following the collapse of the twin towers. These challenges included not only monitoring the first responders but also extended into the process of reclaiming the surrounding buildings. Within days of the attacks, the EPA reported that the air was safe to breathe even though the characterization of the dust created by the collapses was still only in its preliminary stages. It was not until over a year later that an official document was put out by the World Trade Center Indoor Air Taskforce Working Group identifying “contaminants of potential concern” along with suggested clearance criteria. In the ensuing decade, much has been learned not only about the exposures that the responders faced but also about some of the ensuing health effects suffered by them. In addition, specialized training programs and monitoring devices have been developed by various entities for similar disaster scenarios.

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+ Managing the Fatigue of Disaster Workers: Lessons Applied from WTC. B. Lippy, The Lippy Group, LLC, Baltimore, MD.

RT 240
The NIOSH Personal Protective Technologies Program
1:00 p.m.–4:00 p.m. + OCC, F149

Maintaining the health and safety of workers in the United States and globally is accomplished in part by reducing hazardous exposures through the use of personal protective equipment (PPE). Personal protective technologies (PPT) are defined as the specialized clothing or equipment worn by individuals for protection against health and safety hazards, as well as the technical methods, processes, techniques, tools, and materials that support their development, evaluation, and use. PPT encompasses PPE products such as respirators, gloves, protective eyewear, hearing protection, and protective clothing but also includes facepieces, filters, guidance documents, standards, and test procedures. In the United States, federal responsibility for civilian worker PPT is integral to the mission of the National Institute for Occupational Safety and Health (NIOSH). Panelists at this roundtable will discuss how NIOSH’s PPT Program fulfills its mission through three major areas of endeavor: (1) respirator certification as mandated in federal regulations; (2) research focused on protection from respiratory, dermal, and injury hazards; and (3) participation in standards setting and policy making. The overall objective is to provide practicing hygienists with an understanding of the NIOSH PPT program.

+ Program’s Relevance to and Impact on Occupational Health and Safety. M. DAlessandro, NIOSH, Pittsburgh, PA.
+ Respirator Certification and Standards Development. R. BerryAnn, NIOSH, Pittsburgh, PA.
+ Research Portfolio for Respiratory Protection. R. Shaffer, NIOSH, Pittsburgh, PA.
+ Research Focusing on Protective Clothing and Equipment. A. Shepherd, NIOSH, Pittsburgh, PA.
+ NIOSH Personal Protection Technology: Injury Prevention Research. A. Amendola, NIOSH, Morgantown, WV.
+ Hearing Loss Prevention Research. C. Kardous, NIOSH, Cincinnati, OH.
and safety programs based on risk assessment is not new to the EHS professional doing business outside of the United States. In many countries around the world the requirement for mandatory health and safety programs has existed for several decades. This roundtable will discuss the key elements of the proposed rulemaking, offer insight to the use of an effective EHS-MS to meet compliance and discuss the implementation of such programs in the general and construction industries.

- OSHA’s Injury and Illness Prevention Program (I2P2) Proposed Rule: A Deeper Dive. B. Hammock, Jackson Lewis LLP, Reston, VA.
- How OSHA’s I2P2 and an EHS-MS Are Aligned. J. French, Stanley Black & Decker, Lake Forest, CA.
- Establishing the Culture: Injury and Illness Prevention Programs in Construction. G. Crawford Jr., CIH, Weston Solutions Inc., West Chester, PA.
- How to Make Injury and Illness Prevention Programs Work in Construction: A Building Trades Union Perspective. S. Schneider, Scott Schneider, Washington, DC.

RT 242

REACH is Here: How and Where its Impact Will Be Felt by IH Professionals

1:00 p.m.–5:00 p.m. + OCC, Oregon 201
Arranger and Moderator: C. Gherman, Honeywell, Phoenix, AZ. Monitors: M. Kolanz, Brush-Wellman, Inc., Cleveland, OH; S. Battista, 3M Company, St. Paul, MN.

The primary purpose of the European Union REACH (Registration, Evaluation, Authorisation of CHemicals) regulation is the protection of human health and the environment with an integral concept of the importance of communication up and down the supply chain during the exposure scenario and exposure assessments process. REACH has wide ranging impact in all stages of the product life cycle and throughout the supply chain. The registration deadline for the first round of REACH substances has come and gone. Measuring and controlling exposures are key aspects of industrial hygiene but different approaches are required depending on your role within the supply chain. This roundtable discussion explores aspects of REACH that will have a noticeable impact on IH professionals, including the requirements for development and communication of exposure scenarios within the chemical supply chain, the concept of a Derived No Effect Level (DNEL) versus an OEL, how this process aligns with the AIHA Exposure Assessment Strategy, the interaction between GHS and REACH and the implementation of safe working advice by and to downstream users and the public.

- REACH Requirements and IH Impacts Across the Supply Chain. P. Harper, ENVIRON International Corporation, Phoenix, AZ.
- Chemical Producers. R. Skoglund, 3M Company, St. Paul, MN.
- Using the AIHA Exposure Assessment Strategy for REACH. P. Logan, 3M Company, St. Paul, MN.
- The Path to a REACH Exposure Scenario: Downstream User Communication, Exposure Assessment, and Risk Management Measures. J. Walton, 3M Company, St. Paul, MN.
- REACH and GHS — Implementing IH Controls. D. Deeds, Industrial Health & Safety Consultants, Huntington, CT.
- Article Producer Communications. K. Murphy, Honeywell, Tempe, AZ.

Emerging Issues Forum 1

Specializing: Keeping Yourself Relevant in the Changing Market

1:30 p.m.–3:30 p.m. + OCC, A108
The AIHA Registry Programs, LLC, is working with several of AIHA’s volunteer groups to develop registry programs that will provide additional credentials for professionals at all levels in specific areas of OEHS practice expertise. This session will be an open forum for discussion after brief presentations that will provide an overview of the developing programs and the benefits to the participants in the areas of Exposure Assessment Strategies, Green Building, Real-Time Detection, Sampling and Laboratory Analysis, Stewardship and Sustainability, and Value Strategy.

CR 319

Slip Simulator Training: Slip-Trip-Fall Prevention

2:30 p.m.–3:30 p.m. + OCC, D139
Presenter: J. Longo, Diageo, Norwalk, CT.
Moderator: S. Eversmeyer, Port of Portland, Portland, OR.

Preventing slips-trips-falls (STFs) requires addressing the physical environment, footwear and individuals. Addressing individuals — their awareness level and physical ability both to avoid STFs and recover from a slip-trip event — is perhaps the most challenging of all. STF training is not an exciting topic — it’s a sleeper. Learn about how a manufacturer with plants throughout North America deployed the first known portable slip simulator. Is using a slip simulator the most engaging and effective STF training device available?

CR 320

EHS, Lean and Six Sigma

5:00 p.m.–6:00 p.m. + OCC, B113
Presenters: G. Popov, University of Central Missouri, Warrensburg, MO; J. Ganschow, Caterpillar Inc., Moshville, IL. Monitor: J. Zey, University of Central Missouri, Warrensburg, MO.

Lean and Six Sigma are two improvement systems that are being deployed across multiple manufacturing and service sectors. This crossover program is designed to introduce EHS professionals to various Lean and Six Sigma tools applicable to environmental management programs. The presenters will describe how Lean and Six Sigma relate to the environment and provide guidance and tools on how EHS professionals can connect with Lean and Six Sigma activities to generate better environmental and operational results.

CR 321

The Aging Workforce: Occupational Safety, Health, Hygiene and Wellness Considerations

5:00 p.m.–6:00 p.m. + OCC, C126
Moderator: G. Houvener, OSHA, Washington, DC.

An increasing aging workforce poses a different set of concerns and risk in maintaining workplace safety, health, wellness,
productivity and regulatory compliance. Session attendees will be able to identify potential fitness for duty issues, common disease and health risk factors. Attendees will gain knowledge regarding the complex relationships between various regulations from OSHA to FMLA. Participants will learn investigative and decision making approaches for updating occupational safety and health programs and costs potentially posed by an aging work force.

PO 128
Risk Assessment Methods and Applications
5:00 p.m.–7:00 p.m. + OCC, B110

**Arrangers:** P. Williams, E. Risk Sciences, LLP, Boulder, CO; A. Rossner, Clarkson University, Potsdam, NY; **Moderator:** C. Fehrenbacher, US EPA, Washington, DC.

**Monitors:** K. Yost, Coimm Scope, Inc., Claremont, NC; K. Beckner, Occidental Chemical Corporation.

**5:00 p.m.**

Valuation of Control Banding: Performance of the COSHH Essentials Model at a Small and a Medium-Sized Plant. (PO 128-1) E. Lee, E. Slaven, M. Harper, NIOSH, Morgantown, WV; R. Bowen, Bowen EHS, Inc., Chapel Hill, NC.

**5:20 p.m.**


**5:40 p.m.**


**6:00 p.m.**

WITHDRAWN Reassessment of Inorganic Arsenic Risk Analysis with Consideration of Substantial Effect Variables. (PO 128-4) S. Lam, S. Robbins, Consultants, Washington, DC; R. Chen, Georgetown University, Washington, DC; J. Lu, American University, Washington, DC.

**6:20 p.m.**

Metalworking Fluid Risks — Identified by Research Growing Out of a Union Campaign. (PO 128-5) F. Mizer, City University of New York, New York, NY.

**6:40 p.m.**

Analysis of Human Health Risk Throughout the Life Cycle of a Gallium Arsenide Thin Film Photovoltaic Cell. (PO 128-6) W. Cyrs, ChemRisk, San Francisco, CA; K. Krause, A. McIntyre, EORM, San Jose, CA.

PO 129

**Nanotechnology: Assessment and Control**

**5:00 p.m.–7:00 p.m. + OCC, B110**

**Arranger and Moderator:** M. Rosenow, Argonne National Lab, Argonne, IL.

**Monitors:** R. Goldman, 3M Company, St. Paul, MN; L. Poore, University of Kentucky, Lexington, KY.

**5:00 p.m.**

Comparison of Instrument Response when Measuring Different Types of Nanomaterials in Occupational Settings. Using Scanning Mobility Particle Sizer, Surface Area Monitors, and Condensation Particle Counter. (PO 129-1) S. Ham, E. Lee, K. Lee, C. Yoon, Seoul National University, Seoul, Republic of Korea; D. Park, Korea National Open University, Seoul, Republic of Korea; H. Ha, Changwon National University, Changwon, Republic of Korea; E. Jung, Korea Occupational Safety and Health Agency, Incheon, Republic of Korea.

**5:20 p.m.**

Applying Control Technology to Airborne Nanoparticles: Evaluation of Filtration Performance for Engineered Nanoparticles. (PO 129-2) S. Tsai, C. Huang, M. Ellenbecker, University of Massachusetts Lowell, Lowell, MA; M. Echevarria-Vega, University of Puerto Rico, Mayaguez, PR; G. Sotiriou, Particle Technology Laboratory, Zurich, Switzerland; P. Demokritou, Harvard University, Boston, MA.

**5:40 p.m.**

The Optimum Approach to Control Nanoparticle Exposure Using Local Exhaust Ventilation. (PO 129-3) S. Tsai, C. Huang, M. Ellenbecker, University of Massachusetts Lowell, Lowell, MA; K. Dunn, NIOSH Cincinnati, OH.

**6:00 p.m.**

Use of Zero-Background Techniques to Improve Sensitivity and Specificity when Measuring Airborne Exposure to Engineered Nanoparticles. (PO 129-4) H. Papinchak, University of California, Berkeley, Berkeley, CA; R. Kelly, LBNL, Berkeley, CA.

**6:20 p.m.**


**6:40 p.m.**


RT 243

Effective Adult SH&E Training Techniques: Some Tips and Lessons Learned

**5:00 p.m.–7:30 p.m. + OCC, B116**

**Arranger:** J. Jarrell, University of Cincinnati, Cincinnati, OH; **Moderator:** B. Rathbun, US Army, Aberdeen Proving Ground, MD.

**Monitors:** O. Zahn, Military, Lancaster, CA; M. Wan, EOH Consulting, St. Petersburg, FL.

This roundtable continues the tradition of roundtables sponsored by the Communications & Training Methods Committee on effective training techniques using case studies and professional practice updates. The topics being presented are different from those in the past, so conference participants need not worry about repeated presentations. IHs are often called upon to assess the need for and the success of training for the health and safety of their companies’ employees. They may be called on to develop, present, or contract with SH&E trainers to present effective training. Whatever the case, a grasp of what constitutes effective training in diverse settings is essential. This roundtable will feature solutions/lessons learned for the following situations/problems: dealing with different learning styles; training methods for young workers; using video-based objects to enhance training; using social networking tools for training; and evaluating the effectiveness of your training’s “learning transfer.”

+ Dealing with Differing Learning Styles.
J. Jarrell, University of Cincinnati, Cincinnati, OH.
Training Methods for Young Workers. M. Faure, Georgia Institute of Technology, Atlanta, GA.
Enhancing Training with Video-Based Learning Objects. T. Ouimet, Yale University, Plantsville, CT.
Using Social Networking Tools in Safety and Health Training. E. Maples, University of Alabama, Birmingham, AL.
Are They Really Getting It? Now That the Training is Over, Will It Be Effective? J. Dimos, Consultant, Oak Park, IL.

Over 5.5 million workers are potentially exposed to hazardous drugs. The number of workers and environments where hazardous drugs are used is expanding as new drugs are developed and as hazardous drugs are increasingly being used for non-oncology purposes. Workers potentially exposed range from pharmacists, nurses, and physicians to receiving and housekeeping personnel. Although many hazardous drug safe handling practices were advanced in the 1980s and 1990s, studies continue to show worker exposure despite improvements in safety procedures. This session will provide an overview of the science and current recommendations for controlling worker exposure to hazardous drugs. Unique industrial hygiene challenges will also be explored in the context of the increasing use of novel hazardous drug procedures in the operating room, hazardous drug administration via aerosol, and challenges with hazardous drug spill cleanup. This information-packed session with review up to date information that the industrial hygienist can use to develop a plan to protect workers from exposure to hazardous drugs.

40 Years of Occupational Exposure to Hazardous Drugs: Where Are We and What Have We Learned? T. Connor, NIOSH, Cincinnati, OH.
Hazardous Drugs in the Operating Room — Occupational Hygiene Challenges. N. Rice, Intermountain Healthcare, Salt Lake City, UT.
Aerosolized Hazardous Drugs — Controlling Ribavirin and Pentamidine. S. Derman, MediSHARE Environmental Health & Safety Services, Cupertino, CA.
Improving Hazardous Drug Spill Response. M. McCullough, Dana-Farber Cancer Institute, Boston, MA.
Development of a Hazardous Drug Health and Safety Plan. B. Connors, Environmental Health & Engineering, Needham, MA.

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Thursday, May 19

8:00 a.m.-9:00 a.m.
CR 322 Effective Operational EHS Metrics Reviews: Rhythms, Processes and Driving Results
OCC, D139

8:00 a.m.-10:00 a.m.
Emerging Issues Forum 2: Personal Protective Technology Standards and Conformity Assessment
OCC, F149

8:00 a.m.-10:20 a.m.
PO 130 Indoor Environmental Quality II
OCC, D136

8:00 a.m.-11:00 a.m.
RT 245 Health Hazard and Control Banding in the U.S. at a Crossroads: A Panel Discussion
OCC, B110

RT 246 Sampling Strategies in Unusual IH Exposures
OCC, B119

8:00 a.m.-11:00 a.m.
RT 247 Emerging Issues with Bioaerosols in the Pacific Northwest
OCC, C121

RT 251 Welding Health Effects, Exposures, and Exposure Reduction Controls
OCC, B113

8:00 a.m.-11:20 a.m.
PO 131 Community Environmental Health
OCC, A108

8:00 a.m.-11:30 a.m.
RT 248 Environmental Biohazard Control of Multidrug-Resistant Organisms
OCC, B116

RT 249 NIOSH Response to the Deepwater Horizon Oil Spill
OCC, A106

8:00 a.m.-Noon
RT 250 Prevention through Design: Construction and Noise
OCC, F152

1:00 p.m.-2:00 p.m.
CR 324 Accountability and Discipline in Safety: A Complementary Approach
OCC, B119

1:00 p.m.-3:00 p.m.
PO 133 Biosafety and Environmental Microbiology II: Current Topics in Bioaerosols and Agricultural Health and Safety
OCC, C126

1:00 p.m.-3:20 p.m.
PO 134 Ergonomics: Upper Extremity Considerations and Methodological Approaches
OCC, A108

1:00 p.m.-3:30 p.m.
RT 252 Field-Portable and Mobile Analysis and Testing: Developing and Documenting Competencies
OCC, C121

RT 253 Leveraging ES&H Practice with the Latest Technology
OCC, B113

1:00 p.m.-4:00 p.m.
RT 254 The GHS Is Coming—Will You Be Ready?
OCC, A106

RT 255 Notable Confined Spaces
OCC, F149

1:00 p.m.-4:30 p.m.
RT 256 Respiratory Protection in Health Care: Changing Standards and Best Practices
OCC, F152

RT 257 Diacetyl and Diacetyl Substitutes - Where Are We Now?
OCC, B116

2:30 p.m.-3:30 p.m.
CR 325 How to Develop and Sustain an Effective Accident Investigation Program
OCC, B119
Effective Operational EHS Metrics Reviews: Rhythms, Processes and Driving Results
8:00 a.m.–9:00 a.m. + OCC, D139
Presenter: C. Johnson, General Electric, Billerica, MA. Moderator: S. Weeks, Hargrove Engineers + Constructors, Mobile, AL. Monitor: D. Mitchem, West Virginia University, Morgantown, WV.

An effective EHS metrics review process is critical to success in any organization. Come see how a comprehensive EHS scorecard was used to drive improvement and consistent execution across 15+ sites in a $1B+ operating business within General Electric. Discussion will focus on the scorecard itself, adjustments made over a 3-year period, picking the right frequency/audience for the review, and the role of operational leaders and functional EHS leaders in ensuring robust dialogue.

Emerging Issues Forum 2
Personal Protective Technology Standards and Conformity Assessment
8:00 a.m.–10:00 a.m. + OCC, F149
Arranger and Moderator: M. D'Alessandro, NIOSH, Pittsburgh, PA. Monitor: R. Berry Ann, NIOSH, Pittsburgh, PA.

When users purchase personal protective equipment (PPE), they expect it to protect them in the conditions they will use it. The level of protection required by a type of PPE can vary greatly among occupations and work tasks. Conformity assessment of PPE to appropriate product performance standards can provide needed confidence for PPE users.

It is important to coordinate the numerous personal protective technology (PPT) standards to allow for rapid updating that keeps pace with the development of technology and emerging hazards. The process should take advantage of the benefits offered by each current standard and take into account PPE interface and interoperability issues. Conformity assessment systems can be an essential part of an effective standards system for PPE. The standards development process, appropriate conformity assessment, information on the performance of PPE in the workplace and emerging PPE technologies are all critical elements of a robust approach to advancing PPE-related worker safety.

This emerging issues session will discuss how standards and conformity assessment approaches impact proper PPE use. Some questions we want to discuss during this session include:

- What is conformity assessment?
- How can a risk-based approach to conformity assessment system design be applied to PPT?
- How do standards and conformity assessment impact the selection and use of PPE?
- How important are PPE standards to PPE achieving the expected level of protection through proper use, maintenance and training?
- How can standards coordination be achieved for various types of PPE and PPE systems (i.e., ensembles)?
- Under what circumstances is first-party conformity assessment appropriate?
- What mechanisms must be developed or enhanced for federal agencies having authorities in this area to achieve proper coordination?
- How is the PPE user community involved to drive market support for PPE conformity with performance standards?

Speakers will provide presentations and participate in a panel question and answer session to address the questions identified above: Gordon Gillerman, National Institute of Standards and Technology (NIST), Gaithersburg, MD; John Steelnack, OSHA, Washington, DC; Angie Shepherd, Jon Szalajda, NIOSH, Pittsburgh, PA; Cristine Fargo, International Safety Equipment Association (ISEA), Arlington, VA; James Platter, Center for Construction Research and Training, Silver Spring, MD; Jose Rodriguez, Raytheon Corporation, Dulles, VA.

PO 130
Indoor Environmental Quality II
8:00 a.m.–10:20 a.m. + OCC, D136
Arranger: J. Hicks, Exponent, Inc., Oakland, CA. Moderator: M. Cooper, Novellus Systems, Inc., San Jose, CA. Monitors: L. Albin, Purdue University, West Lafayette, IN; D. Dahlstrom, ENVIRON International Corp., Atlanta, GA.

8:00 a.m.
Case Studies Using Particle Identification for Forensic Indoor Environmental Quality Investigations. (PO 130-1) M. Andrew, Sumerra, Hong Kong.

8:20 a.m.
Secondhand Tobacco Smoke Exposure in Baton Rouge, Louisiana, Bars and Casinos. (PO 130-2) D. Harrington, New Orleans, LA; J. Klink, Louisiana Public Health Institute, New Orleans, LA.

9:00 a.m.
Evaluating a Residence Following a Smoke Event and the Subsequent Cleanup. (PO 130-3) S. Evans, MDE Inc., Seattle, WA.

9:20 a.m.
Evaluating Control of Elevated Naphthalene Levels in Residential Indoor Air Emanating from Creosote-Soaked Timber. (PO 130-5) P. Beach, Harris & Lee Environmental Sciences, LLC, San Francisco, CA.

9:40 a.m.
IAQ Guidelines for Occupied Buildings Under Construction. (PO 130-6) K. Grist, SMACNA, Kansas City, MO.

10:00 a.m.
Ethanol from Reed Diffusers and Hand Sanitizers: Why Should I Care? (PO 130-7) M. Spartz, Prism Analytical Technologies, Inc., Mt. Pleasant, MI.
RT 246

Sampling Strategies in Unusual IH Exposures
8:00 a.m.–10:30 a.m. + OCC, B119

Arranger: M. Eide, Retired, Murray, UT.
Moderator: P. Kostle, State Hygienic Laboratory, Iowa City, IA.

Unique sampling strategies are used when investigating an odor, an unknown chemical exposure, vapor intrusion, emergency response, or indoor air quality monitoring. When encountering unique or nonstandard exposures the standard exposure assessment strategies need to be modified or new strategies need to be used. A variety of sampling media can be used by the industrial hygienist to determine exposures in these nonstandard industrial hygiene situations. The industrial hygienist is encouraged to involve their AIHA-accredited laboratory, as they can provide valuable information and resources in determining the exposures.

RT 247

Emerging Issues with Bioaerosols in the Pacific Northwest
8:00 a.m.–11:20 a.m. + OCC, A108


The Pacific Northwest has one of the wettest climates in North America, with an average annual rainfall of over 1 meter (39 inches) in Vancouver alone. This moisture creates an ideal growth environment for microorganisms and causes other potential problems for buildings and workplaces. The past two decades have seen serious damage to residential condominiums from wood rot, and some of the major and developing industries (e.g., forestry and composting) have significant issues with worker exposures to bioaerosols. There is also evidence of an emerging fungal pathogen (Cryptococcus gattii) in our forests. This session will examine some of these issues and the methods and approaches that researchers and industrial hygienists in the Pacific Northwest are utilizing to deal with them.

PO 131

Community Environmental Health
8:00 a.m.–11:20 a.m. + OCC, B113

Arranger and Moderator: M. Vela Acosta, The Kresge Foundation, Troy, MI.

Welding Health Effects, Exposures, and Exposure Reduction Controls
8:00 a.m.–11:00 a.m. + OCC, B113

Arranger and Moderator: A. Sier, Xcel Energy, Denver, CO.

Welding is among the most important and most utilized industrial processes, and welders comprise one of the largest working populations. Yet from an industrial hygiene perspective much remains to be learned due to the large number of processes and exposure variables. Efforts to create shared exposure databases are under way, yet previous efforts are of very limited value due to quality and comparability problems. Due to disparate findings of previous epidemiology studies, health effects have remained equivocal and controversial. Hexavalent chromium and manganese exposures are of interest, and recent studies indicate that other metals may be important as well. The OSHA Hexavalent Chromium Standard now requires engineering controls to reduce exposures where feasible, and ACGIH has placed manganese on the List of Intended Changes to reduce the TLV tenfold. Application of exposure reduction controls such as local exhaust ventilation and process change is complicated by technical feasibility limitations in many cases. However, significant recent advancements are being made in these areas and results will be presented by leading researchers.

Efficacy of “Green” Cleaning Products for Reducing Microbial Loads on Household Surfaces
8:00 a.m.

(PO 131-1) M. Shum, D. Fong, National Collaborating Centre for Environmental Health, Vancouver, BC,
An Overview of Multidrug-Resistant Cleaning and Disinfection: An Overview
Occupational Exposure Evaluation During Exposure Monitoring During the Deepwater Horizon Response. The Many
evaluation of airborne exposures and the importance of facility design and development of a voluntary roster for Portland, OR.


Environmental Biohazard Control of Multidrug Resistant Organisms. The risks and benefits of using germicidal UV. S. Miller, University of Colorado, Boulder, CO.

Managing Odor Concerns in a Petrochemical Complex. N. Mydin, Petronas, Kuala Lumpur, Malaysia.

Exposure Monitoring During the Deepwater Horizon Response. F. Tremmel, BP, Naperville, IL; M. Chau, C. Metzler, K. Murray-del Aguila, BP, Houston, TX; J. Dobbie, BP, Sunbury, United Kingdom; D. Dutton, DRD Toxicology Services Inc., Lisle, IL; H. Hewett, Exposure Assessment Solutions, Inc., Morgantown, WV; K. O'Shea, BP, Whiting, IN.

Environmental approaches to the control of these organisms. The session will describe the major organisms of concern, provide an overview of cleaning and disinfecting methods, and describe some unique infection control strategies such as the use of ultraviolet radiation and chemical fumigation. The session will also describe the role of personal protective equipment in infection control and discuss the uses and limitations of “green” or sustainable products in cleaning and disinfection. Finally, important design and construction issues in the control of infections will be discussed.

An Overview of Multidrug-Resistant Organisms. M. Patrick, MultiCare Health System, Tacoma, WA.

+ The Risks and Benefits of Using Germicidal UV. S. Miller, University of Colorado, Boulder, CO.

+ The Risks and Benefits of Chemical Fumigation in Room Decontamination. G. Byrns, Illinois State University, Normal, IL.

+ Shortcomings in Health Care Personal Protective Equipment. T. Fuller, Illinois State University, Normal, IL.

+ The Importance of Facility Design and Construction in Infection Control. L. Lee, Pacific Industrial Hygiene LLC, Kirkland, WA.

RT 248
NIOSH Response to the Deepwater Horizon Oil Spill
8:00 a.m.–11:30 a.m. + OCC, A106
Arranger and Moderator: T. Seitz, NIOSH, Cincinnati, OH. Monitors: S. Ahrenholz, S. Brueck, NIOSH, Cincinnati, OH.

This roundtable will discuss NIOSH activities related to the Deepwater Horizon oil spill. Initial efforts focused on the development of a voluntary roster of over 50,000 response workers to document who was responding and enable their follow-up after the response had ended. Early in the response, BP requested assistance from NIOSH’s Health Hazard Evaluation Program, initially focusing on off-shore responders conducting booming and skimming operations, and later covering a much wider variety of response tasks including dispersant spraying, in situ burning of surface oil, source control, wildlife cleanup, onshore cleanup, waste management, and equipment/vessel decontamination. Speakers will address potential health and safety hazards encountered during the on-site exposure characterizations, health surveys, and observational studies and will present findings and recommendations. The many logistical challenges encountered during these evaluations will also be described. NIOSH efforts to summarize injury and illness data collected by BP will also be discussed along with notable injury and illness trends.

Development of a Voluntary Roster for Over 50,000 Response Workers. L. Delaney, NIOSH, Atlanta, GA.

Occupational Exposure Evaluation During Small-Scale, Vessel-Based Dispersant Releases. B. King, NIOSH, Cincinnati, OH.

Evaluation of Airborne Exposures and Health Symptoms During In Situ Burning of Oil. C. Dowell, NIOSH, Cincinnati, OH.
Prevention through Design: Construction and Noise
8:00 a.m.—Noon + OCC, F152


Prevention through design is a concept widely used in industry. The purpose of Prevention through Design is to identify potential health hazards inherent in the design, and recommend effective engineering controls. This session will give an overview of the Prevention through Design process and will present examples of design requirements from industry and the work done in collaboration with equipment manufacturers to meet design expectations. Case studies demonstrating the implementation of engineering controls in various industries will also be presented.

Applying PtD to Design — Build — Start-Up. D. Heidel, NIOSH, Washington, DC.

Prevention through Design Concepts and Practice. J. Gambatese, Oregon State University, Corvallis, OR.

Prevention through Design — What it Is, How Does it Work, and Review of Best Practices. J. Borowski, Black & Veatch, Kansas City, MO.


EHS by dEHSign at Amgen. D. Bender, Amgen, Thousand Oaks, CA.


Reducing Noise through Industrial Hygiene Design. R. Powell, ExxonMobil, Baytown, TX.

Community Noise Control Program for a Petroleum Refinery. P. Owens, Shell, Hanford, CA.

Noise Assessments and Hearing Loss Assessments Conducted at Four Animal Shelters. C. Achutan, University of Nebraska, Omaha, NE.

PO 132

Aerosols
8:00 a.m.—12:20 p.m. + OCC, D138

Arranger and Moderator: S. Paik, Lawrence Livermore National Laboratory, Livermore, CA. Monitors: E. Reed, Liberty Mutual Insurance Co., Englewood, CO; S. Kim, University of Minnesota, Minneapolis, MN.

Use of Handheld Particle Counters to Determine Nanoparticle Concentrations. (PO 132-1) P. O’Shaughnessy, L. Schmoll, T. Peters, University of Iowa, Iowa City, IA.

Wind Tunnel Performance Evaluation for a Fungal Spore Personal Sampler. (PO 132-2) W. Su, Y. Cheng, Lovelace Respiratory Research Institute, Albuquerque, NM.


Application of ATP Bioluminescence Method to Analyze Performance of Traditional and Novel Bioaerosol Collectors. (PO 132-4) T. Han, G. Mainelis, Rutgers University, New Brunswick, NJ.

Applying the Right Tool for the Job: Selecting the Appropriate Sampling Stencil for HEPA Filter Leakage Estimates. (PO 132-5) G. Hrbek, LANL, Los Alamos, NM.

10:00 a.m.

Particle Size Analysis for Mn in Welding Fume Generated by Hybrid Laser Arc Welding. (PO 132-6) D. Chute, Atrium EH&S Services, LLC, Reston, VA; P. Blomquist, Applied Thermal Sciences, Inc., Sanford, ME.

10:20 a.m.

Ultrasonic Particle (UFP) Exposures in the Soderberg and Prebake Processes of an Aluminum Smelter. (PO 132-7) A. Dufresne, M. Debia, R. Tardif, Universite de Montreal, Montreal, QC, Canada; S. Weichenthal, Health Canada, Ottawa, ON, Canada.

10:40 a.m.


11:00 a.m.

Flour Dust in Traditional Bakeries. (PO 132-9) S. Aubin, B. Roberge, Y. Cloutier, IRSST, Montréal, QC, Canada.

11:20 a.m.


11:40 a.m.


CR 323

Toxic Substance Control Act: Not Just Asbestos
9:30 a.m.—10:30 a.m. + OCC, D139

Presenters: N. Feldscher, New York City Department of Environmental Protection, Corona, NY; D. Mueller, Saint-Gobain North America, Valley Forge, PA. Moderator: P. Stanch, NASA, Houston, TX.

The Toxic Substance Control Act (TSCA) was intended to regulate the manufacturing, processing, use, distribution and disposal of chemical substances and mixtures and was expanded to specifically include asbestos, lead-based paint, and radon. This is a broad regulation that can greatly impact all aspects of a chemical’s life cycle (and your involvement therein). This presentation provides a comprehensive understanding of EPA’s program of general chemical regulation, along with the specific programs for PCBs, asbestos, and Pb paint.
Stokinger Lecture

Some Recent Changes in the Control of Toxic Substances in the Workplace in the UK and the EU
12:30 p.m.–1:30 p.m. + OCC, B110

Lecturer: Len Levy

The UK was one of the first countries to drive the “industrial revolution,” particularly the chemical industry and engineering, becoming one of the leading countries to develop research and regulation for industrial hygiene and toxicology. However, vast changes in the demographics of work in the UK have led to a realignment of priorities for both industries and for the UK Health and Safety Executive (HSE). At the same time, the UK’s membership in the European Union (EU) and most recently, the newly introduced EU Regulations are having an impact on the way the HSE and industry deal with the control of chemicals in the workplace.

This lecture will describe how occupational exposure limits are now set in the EU and the UK in these times of changed work demographics and stringent budgetary restraints. It will also cover newer findings, such as a re-evaluation of the “burden of occupational cancer” estimates that have not been reviewed since the figures produced by Doll and Peto in 1981.

CR 324

Accountability and Discipline in Safety: A Complementary Approach
1:00 p.m.–2:00 p.m. + OCC, B119

Presenter: D. Groover, D. Groover, BST, Ojai, CA.

Accountability and discipline are among the most confusing and controversial topics in safety. Clouding the matter is that many people use “discipline” and “accountability” interchangeably. This talk shows how accountability and discipline are distinct but complementary practices that help create balance and order in safety activities and the organization.

PO 133

Biosafety and Environmental Microbiology II: Current Topics in Bioaerosols and Agricultural Health and Safety
1:00 p.m.–3:00 p.m. + OCC, C126


1:00 p.m.
Air Sampling for Bioaerosols — What is the Significance? (PO 133-1)
M. Saranaga, Oklahoma State University, Stillwater, OK; H. Holder, SWK LLC, Blano, TX; E. Althouse, Air Intelec LLC, Tallahassee, FL; E. Karunasena, D. Straus, Texas Tech University, Lubbock, TX.

1:20 p.m.
Relative Effectiveness of Impactor Sampling Among Six Airborne Viruses. (PO 133-2)
P. Raynor, J. Appert, T. Kuehn, Z. Zuo, S. Ge, University of Minnesota, Minneapolis, MN; S. Goyal, M. Abin, Y. Chandler, H. Guraino, University of Minnesota, St. Paul, MN.

2:00 p.m.
Culture-Independent Characterization of Bacteria in Poultry and Dairy Bioaerosols Using Pyrosequencing: A New Approach. (PO 133-3)
M. Nonnenmann, A. Hussain, K. Gilmore, J. Levin, B. Bextine, University of Texas at Tyler, Tyler, TX; S. Dowd, Research and Testing Laboratory, Lubbock, TX; W. Ward, Stephen F. Austin State University, Nacadoches, TX.

Inhalable and Respirable Organic Dust Concentrations During Broiler Production. (PO 133-5)
M. Nonnenmann, A. Hussain, K. Gilmore, J. Levin, University of Texas Health Science Center at Tyler, Tyler, TX; W. Ward, J. Bray, S. Jerez, Stephen F. Austin State University, Nacadoches, TX.

2:40 p.m.
Quantitative Spectrofluorometric Analysis of Pesticide Exposure and Exposure Control Measures. (PO 133-6)
H. Zetlen, R. Fenske, K. Galvin, University of Washington, Seattle, WA.

PO 134

Ergonomics: Upper Extremity Considerations and Methodological Approaches
1:00 p.m.–3:20 p.m. + OCC, A108

Arranger and Moderator: M. O’Reilly, Albany University, Manlius, NY. Monitors: S. Tooley, The Boeing Company, Seattle, WA; L. Orta Anes, University of Puerto Rico, San Juan, PR.

1:00 p.m.
Evaluation of Fatigue Resulting from Intensive Computer Mouse Use with VDTlog. (PO 134-1)
Y. Hwang, F. Chang, H. Liang, National Taiwan University, Taipei, Taiwan.

1:20 p.m.
Interventions for Overhead Drilling into Concrete. (PO 134-2)
D. Rempel, M. Robbins, A. Barr, D. Star, I. Janowitz, University of California, San Francisco, Richmond, CA.

1:40 p.m.
Ergonomic Design and Radiologic Exposure Assessment of a Nuclear Pharmacy Workstation. (PO 134-3)
S. Cole, J. McLachlin, K. Weatherman, H. Nie, J. Poulson, Purdue University, West Lafayette, IN; M. Green, Indiana University, Purdue, Indianapolis, IN.

2:00 p.m.
Pre- and Post-MSD (Musculoskeletal Disorders) Symptom After the Implementation of Korean Traditional Mask Dance (KTMD) to Cosmetic Manufacturing Production Workers. (PO 134-4)
S. Ham, Seoul National University, Seoul, Republic of Korea; W. Eoh, Hankook Cosmetics, Seoul, Republic of Korea; W. Ham, Korea Occupational Safety and Health Agency, Incheon, Republic of Korea.

2:20 p.m.
Review of Physiological Changes and Ergonomic Design Considerations for the Aging Populations. (PO 134-5)
B. McGowan, Humantech, Inc., Ann Arbor, MI.
The Asbestos Analysts Registry (AAR). There’s an App for That ... M. Rollins, Challenges and Approaches for Creating Computing Platforms, the Good, Bad and Web-Based Data Management Systems. An XRF Field Measurement Registry — Final Program The Challenge of Reclassifying Substances A Beryllium Field Analysis Registry. An XRF Field Measurement Registry — How Many Samples? Using Visual Sample Chemical Emergency Medical Implementing GHS Training at Your Status of the OSHA Hazard An XRF Field Measurement Registry. RT 252 Field-Portable and Mobile Analysis and Testing: Developing and Documenting Competencies 1:00 p.m.–3:30 p.m. + OGC, C121 RT 253 Leveraging ES&H Practice with the Latest Technology 1:00 p.m.–3:30 p.m. + OGC, B113 RT 254 The GHS is Coming—Will You Be Ready? 1:00 p.m.–4:00 p.m. + OGC, A106 RT 255 Notable Confined Spaces 1:00 p.m.–4:00 p.m. + OGC, F149
So often workers enter confined spaces but are not trained to recognize when the work to be done can change the confined space from safe to potentially fatal. In one decade-long Federal Chemical Safety Board study (Mary Devany, 2003), 80% of the people who died had done work before, inside that exact confined space, without any problems. In 40% of fatal atmosphere accidents, the hazard was not present at the time of initial entry. This failure to recognize new hazards brought by the work to be done inside the confined space — requiring reclassifying the non-permit required confined space into a permit-required one — is an all-too-common and sometimes fatal mistake. In this sixth annual notable CS roundtable, seasoned CS entry experts explore the hazards of work performed in confined spaces, emphasizing how the work done inside can change the task from routine and safe to fatal. In some presentations, the fatal conditions were recognized and eliminated, or at least acceptably controlled, protecting the workers. In others, the outcome was serious injury or death.

**RT 257**

**Diacetyl and Diacetyl Substitutes — Where Are We Now?**

1:00 p.m.–4:30 p.m. + OCC, B116

**Arranger and Moderator:** L. McKernan, NIOSH, Cincinnati, OH. **Moderator:** T. Seitz, NIOSH, Cincinnati, OH.

Diacetyl, a common ingredient in butter and other flavorings, continues to receive significant attention in our profession. Occupational exposures to diacetyl have been associated with flavorings related lung disease including bronchiolitis obliterans (BO), a rare lung disease characterized by fixed airways obstruction. In response, companies have begun to use diacetyl substitutes, such as 2,3-pentanedione, to reduce worker exposure to diacetyl. Recent toxicological research with 2,3-pentanedione suggested deleterious effects. California Occupational Safety and Health Administration recently promulgated a standard for diacetyl and federal OSHA has announced that they are initiating rulemaking efforts. The objective of this session is to focus on key developments for diacetyl and diacetyl substitutes including medical surveillance programs, exposure assessment strategies, engineering controls, analytical chemistry techniques, and a proposed NIOSH recommended exposure limit (REL).

**CDC Guidelines for Respiratory Infection Control in Health Care.** T. Seitz, NIOSH, Cincinnati, OH.

**Respiratory Protection for Bioaerosols.** S. Sui, SRS Consultants Inc., London, ON, Canada.

**Canadian Standards Association — Z94.4 Bioaerosols Control Banding.** S. Smith, 3M Canada Company, Brockville, ON, Canada.

**Issues and Controversies in Implementing California’s Aerosol Transmissible Disease Standard.** D. Gold, OSHA, Oakland, CA.

**Planning for Surge: The Veterans Affairs Efforts to Address Infectious Disease Surge Capacity.** A. Eagan, Veterans Health Administration, Gainesville, FL.

**Best Practices in Health Care Respiratory Protection Programs.** S. Derman, Medishare Environmental Health & Safety Services, Cupertino, CA.

**Enhancing Adherence to Respiratory Protection Among Healthcare Workers.** K. Nichol, University of Toronto, Toronto, ON, Canada.

**CR 325**

How to Develop and Sustain an Effective Accident Investigation Program

1:00 p.m.–4:30 p.m. + OCC, B116

**Arranger:** B. Moriarty, Chubb Insurance, Glen Ellyn, IL. **Moderator:** S. Eversmeyer, Port of Portland, Portland, OR. **Monitor:** L. Cena, University of Iowa, Iowa City, IA.

An accident investigation program is the most important safety program a company can have; however, accident investigation is one of the weakest programs in many companies today. A study of completed accident investigation reports typically reveals significant gaps in identifying the root cause and control techniques that focus on the elimination of the exposure. Accident investigation requires a process, which leads the investigator to an exposure control effort. The objective of this session is to focus on key developments for diacetyl and diacetyl substitutes including medical surveillance programs, exposure assessment strategies, engineering controls, analytical chemistry techniques, and a proposed NIOSH recommended exposure limit (REL).
**Poster Sessions: Monday–Wednesday**

**Expo, Hall B**
Posters are grouped by topic and authors are stationed at their posters at designated times to answer questions. It’s a great spot on the Expo floor to meet colleagues and to discuss the latest research in OEHS!

All posters are open for viewing 9:00 a.m., Monday, May 16 through 1:00 p.m., Wednesday, May 18.

**Poster Session Arrangers**
- Chad Dowell, NIOSH, Cincinnati, OH.
- Aleksandr Stefaniak, NIOSH, Morgantown, WV.
- R. Kent Olstenstad, University of Alabama, Birmingham, AL. (Student)

**Poster Session 401**
**Author Attend Time:** Monday, May 16, 10:00 a.m.–Noon

**Aerosols**
**PS 401-1 The Study of Surviving of Bacteria on Charcoal Filters Under Nutrient, Moisture Regain and Water Content Conditions**
- C. Lai, C. Chen, H. Wen, Chung Shan Medical University, Taichung, Taiwan; P. Hung, C. Chang, Institute of Occupational Safety and Health, Taipei, Taiwan.

**PS 401-2 Characteristics of Acid Gas and Acid Aerosol Emissions from Trichlorosilane Burning Processes Under Various Humidity Conditions**
- J. Soo, P. Tsai, S. Li, W. Lee, National Cheng Kung University, Tainan, Taiwan; J. Chen, National Kaohsiung First University of Science & Technology, Kaohsiung, Taiwan; C. Chang, Y. Ho, Institute of Occupational Safety and Health, Taipei, Taiwan.

**PS 401-3 Ultrafine Particle (UFP) Exposures During Different Welding Processes in a Welding Training School**
- M. Debia, R. Tardif, A. Dufresne, University of Montreal, Montreal, QC, Canada; S. Weichenthal, Health Canada, Ottawa, ON, Canada.

**PS 401-4 Portable Aerosol Spectrometer for Nanoparticle Monitoring**
- A. Ghimire, J. Gromala, Particle Measuring Systems, Boulder, CO.

**PS 401-5 Monitoring and Comparison of Airborne Nanoparticle Concentrations in Two Carbon Nanotubes Growth Laboratories**
- J. Ha, Y. Shin, S. Lee, Inje University, Gimhae, Republic of Korea.

**Air Sampling Instrument Performance**
**PS 401-6 Respirable Crystalline Silica Measurement in Coal Mine Dust with High Flow Rate Samplers**

**PS 401-7 Using a Tracer Gas to Determine Air Exchange Rate: A Side-by-Side Comparison of Instrumentation**
- J. Lang, J. Persky, C. Simmons, R. Jones, Environ International Corp., Chicago, IL.

**Biosafety and Environmental Microbiology**
**PS 401-8 Exposure Assessment of Legionella pneumophila in Nursing Homes of Taiwan**
- C. Chang, N. Chen, Y. Wu, K. Ming, National Taiwan University, Taipei, Taiwan.

**PS 401-9 Dispersion of Bioaerosols in the Negative Pressure Isolation Rooms**
- T. Lin, F. Lin, J. Liu, H. Chang, China Medical University, Taichung, Taiwan; P. Hung, C. Chang, Institute of Occupational Safety and Health, Taipei, Taiwan.

**PS 401-10 Assessment of Exposure to Airborne Fungal Fragments Using (1–3)-β-D-glucan Measurement: An Office Building Study**
- J. Park, J. Cox-Ganser, NIOSH, Morgantown, WV.

**Indoor Environmental Quality**
**PS 401-11 Direct-to-Consumer Genetic Testing: What Occupational Health Professionals Should Know**
- T. Morris, Morris Innovative IH&S Solutions, Cincinnati, OH.

**PS 401-12 U.S. Army Vehicle Tailpipe Local Exhaust Ventilation (LEV) System Requirements**
- G. Berckman, C. Harrison, US Army, Meade, MD.

**PS 401-13 A Proposal for Calculating Occupational Exposure Limits for Organic Compounds on the Basis of Their Physicochemical Properties**
- M. Jakubowski, Institute of Occupational Medicine, Lodz, Poland.

**PS 401-14 Comparison of Collection Efficiencies Between Filter and Impinger for Evaluation of Occupational Exposure to Toluene Diisocyanates (TDIs) in Spray Painting and Drying Processes**
- J. Roh, H. Park, J. Won, C. Kim, Yonsei University College of Medicine, Seoul, Republic of Korea.

**PS 401-15 Analysis of Peracetic Acid-Based Sterilizers**
- D. Duffy, ESIS Environmental Health Lab, Cromwell, CT.

**PS 401-16 Work Practices and Attitudes Toward Safety in Small Collision Repair Shops**
- A. Bejan, D. Parker, M. Skan, Park Nicollet Institute, Minneapolis, MN; L. Brosseau, University of Minnesota, Minneapolis, MN.

**WITHDRAWN**

**PS 401-17 Assessment of Occupational Hazards and Legislative Compliance in Animal Shelters**
- K. Idler, C. Lawrie, Ontario Ministry of Labour, Kingston, ON, Canada.

**Poster Sessions 402**
**Author Attend Time:** Monday, May 16, 2:00 p.m.–4:00 p.m.

**Communication and Training**
**PS 402-1 Self-Paced Acquisition of Business Acumen to Manage HSE**
- J. Hinton, Baker Hughes, Houston, TX.

**Community Environmental Health**
**PS 402-2 Data Available on the Environmental and Occupational Burden of Disease in Canada**
- P. Williams, E Risk Sciences, LLP, Boulder, CO; K. von Stackelberg, E Risk Sciences, LLP, Boston, MA.

**PS 402-3 Urinary Excretion of Cadmium, and Diabetes Among Residents Nearby to an Industrial Complex: Sihwa-Banwol Industry, Korea**
- K. Yi, C. Yoon, Seoul National University, Seoul, Republic of Korea.

**PS 402-4 In Search of Background Asbestos in Ambient Air**
- J. Kegebein, Kegebein Consulting, Oakland, CA.

**Exposure Assessment Strategies**
**PS 402-5 Exposure Assessment of Exhaust-Related Agents During Sub Sea Road Tunnel Rehabilitation Work**
- S. Foreland, Norwegian University of Science and Technology, Trondheim, Norway; M. Buhagen, University Hospital of Trondheim, Trondheim, Norway.

**PS 402-6 Exposure Assessment of Dust and Quartz During Sub Sea Road Tunnel Rehabilitation Work**
- M. Buhagen, University Hospital of Trondheim, Trondheim, Norway; S. Foreland, Norwegian University of Science and Technology, Trondheim, Norway.

**PS 402-7 Application of Targeted Risk Assessment in the Workplace to Exposure Assessment**
- S. Czerczak, M. Kupczewska-Dobek, The Nofer Institute of Occupational Medicine, Lodz, Poland.
PS 402-8 Exposure to Chemical Agents of Motorway Workers. D. Cortica, E. Grigiani, Fondazione Salvatore Maugeri, Padova, Italy.
PS 402-9 Exposure Assessments: Are We Properly Accounting for All Contaminants? T. Morris, Morris Innovative IH&S Solutions, Cincinnati, OH.
PS 402-10 Solvent and Isocyanate PPE Breakthrough Using PERMEA-TEC Sensors During Spray Painting in Auto Body Repair Centers. D. Zanarini, D. Ceballos, M. Yost, University of Washington, Seattle, WA.
PS 402-11 Application of Bayesian Decision Analysis to Determine the Modified Exposure Profile and the Priority of High Health-Risk Industries. S. Wang, P. Tsai, National Cheng Kung University, Tainan, Taiwan.
PS 402-12 Random Airspeed Variability Within a Room and its Implications for Exposure Modeling. C. Keil, K. Musgrave, Bowling Green State University, Bowling Green, OH.
PS 402-13 Successful Coordination of Industrial Hygiene and Operations Staff in Evaluation of Beryllium Activities. D. Siegel, B. Duran, Los Alamos National Laboratory, Los Alamos, NM.
PS 402-14 Design and Conduct of an Industrial Hygiene Field Site Monitoring Strategy for Offshore Production Operations to Document the Potential for Occupational Exposures to Chemical and Physical Hazards as Well as Platform Surveys for Asbestos and Lead. J. Koehn, Jan Koehn, CIIH, Inc., Houston, TX; H. McCutcheon, Devon Energy, Houston, TX.
PS 402-15 Sampling Strategy Design of Potential Benzene and Hydrogen Sulfide Personal Breathing Zone Exposures for Field Technicians Associated with Gas Pipeline Operations Located in New Mexico, Including Industrial Hygiene Monitoring and Assessment Results. J. Koehn, Jan Koehn, CIIH, Inc., Houston, TX; R. Acker, Ackellent Consultant, Monument, CO; C. Newman, HH Laboratory, Inc., Webster, TX.
PS 402-16 Dust Exposure and Respiratory Symptoms Among Workers in Southern Tanzania Softwood Sawmill Industries. L. Rongo, MUHAS, Dar es Salaam, United Republic of Tanzania.

Poster Sessions 403
Author Attend Time: Tuesday, May 17, 10:00 a.m.–Noon

Agricultural Health and Safety
PS 403-1 Skid Loader Noise Exposure Assessment in a Confinement Dairy Barn. S. Milz, E. Smith, F. Akbar-Khanzadeh, S. Khuder, University of Toledo, Toledo, OH.
PS 403-2 Inflammatory Constituents in Agricultural Dusts. S. Kircyuch, W. Davicki, G. Katselis, D. Schneberger, N. Ovsenek, Z. Belak, N. Just, J. Gordon, University of Saskatchewan, Saskatoon, SK, Canada.
PS 403-3 Evaluation of Exposures to Pesticides and Parasitic Vectors During Inspection of Imported Plants. S. Durgam, C. Aristegueta, NIOSH, Cincinnati, OH.

Ergonomics

Health Care Industries
PS 403-6 Evaluation of Potential Noise Exposures in Hospital Operating Rooms. L. Chen, S. Brueck, NIOSH, Cincinnati, OH.
PS 403-8 Evaluation of Ultraviolet Light Blocking Properties of Personal Protective Equipment for Use in Orthopedic Operating Rooms. R. Kirwan, N. Greson, C. Tencer, Duke University, Durham, NC.

Laboratory Health and Safety
PS 403-10 Exposures to a Methylmethacrylate During Componental Analysis of Methylmethacrylate. Y. Cho, Korea Occupational Safety and Health Agency, Yeosu City, Republic of Korea.
PS 403-11 Controlling Formaldehyde Emissions in an Academic Gross Anatomy Laboratory: A Success Story. C. King, P. Castagna, R. Klein, Yale University, New Haven, CT.

Lead
PS 403-12 Air Lead Concentrations in Smelting and Lignite Factories. B. Lee, Soonchunhyang University, Cheonan, Republic of Korea.

Mold
PS 403-14 Opportunistic Fungal Pathogen Screen: A New Method for Rapid Assessment of Mold-Affected Medical Facilities. J. Scott, R. Summerbell, M. Saleh, Sporometrics, Inc., Toronto, ON, Canada.
PS 403-15 Fungal Habitat and Physiology: A Focused Approach to the Investigation of a Strange Fungal Contamination: Herpotrichiellaceae in a Production Process. K. White, Sporometrics, Toronto, ON, Canada; R. Summerbell, University of Toronto, Toronto, ON, Canada.
**Sampling and Analysis**

PS 403-17 Sampling and Analysis of Airborne Trichloramine in Indoor Swimming Pools. T. Chu, S. Tsai, National Taiwan University, Taipei, Taiwan; S. Cheng, Council of Labor Affairs, Executive Yuan, Taipei, Taiwan.


PS 403-19 The Discrimination of Asbestos Fibers from Other Fibers on Collected Air Filters. L. Monteith, University of Washington, Seattle, WA.

PS 403-20 The Stability of Sulfur Compounds, Low Molecular Weight Gases and VOCs in Four Air Sample Bag Materials. C. Kuhlman, L. Coyne, SKC, Inc., Eighty Four, PA.

PS 403-21 The Development and Validation of a Diffusive Sample with a Variable Sampling Rate for Long-Term Sampling of VOCs. L. Coyne, C. Kuhlman, SKC, Inc., Eighty Four, PA.

**Poster Sessions 404**

Author Attend Time: Tuesday, May 17, 1:00 p.m.–3:00 p.m.

**Engineering and Control**

Technology

PS 404-1 Characterizing Ventilation in Collision Repair Spray Painting Booths. K. Broadwater, M. Yost, D. Ceballos, University of Washington, Seattle, WA; C. Whitaker, Washington State Department of Labor and Industries, Olympia, WA.

PS 404-2 Local Exhaust Ventilation: Excellent for the Effective Reduction and Control of Combustible Dust. K. Housman, Liberty Mutual Group, Birmingham, AL.


PS 404-4 Crystalline Silica Exposure During Trenching Activities. S. Al Rawahi, Petroleum Development Oman, Muscat, Oman.

PS 404-5 Unexpected Cadmium and Beryllium Dust Exposures from Hand Grinding on Aircraft Parts — A Case Study. D. Weber, Liberty Mutual Insurance, Glastonbury, CT.

**Occupational Epidemiology**

PS 404-12 Study on Work-Related Fatigue and Stress of University Faculties — A Private Technological University. C. Tsai, M. Chen, J. Shiel, Chung Hwa University of Medical Technology, Tainan County, Taiwan; I. Mao, Chung Shan Medical University, Taichung City, Taiwan.

**Personal Protective Clothing and Equipment**

PS 404-13 Use of a Robotic Sprayer and Permeation Panel to Evaluate Glove Efficacy Against Isocyanates. D. Ceballos, NIOSH, Cincinnati, OH; M. Yost, K. Broadwater, R. Crampton, University of Washington, Seattle, WA; M. Millbauer, Green River Community College, Auburn, WA.

**Respiratory Protection**

PS 404-14 Evaluation of the Benefit of the User Seal Check on N95 Filtering Facepiece Respirator Fit: A Pilot Study. D. Viscusi, Z. Zhuang, R. Shaffer, NIOSH, Pittsburgh, PA; M. Bergman, URS Corp., Pittsburgh, PA.


**Risk Assessment (Management)**

PS 404-16 An Attempt to Assign the Skin Notation of Chemicals According to Their Molecular Structure. S. Czerzak, M. Kupezevska Dobeka, The Nofer Institute of Occupational Medicine, Lodz, Poland.

PS 404-17 Application of an Updated Methodology for Deriving Immediately Dangerous to Life or Health (IDLH) Values. A. Parker, A. Maier, Toxicology Excellence for Risk Assessment, Cincinnati, OH; S. Dotson, NIOSH, Cincinnati, OH.

**Toxicology**

PS 404-18 Dose-Dependent Responses of Human Skin to Industrial Solvent and Mixed Hydrocarbon Exposures. C. Richard, Medical Science Affiliates, Columbia, MD; P. Lehman, T. Franz, Cetero Research, Fargo, ND.

**WD 504 Wood Dust Posters**

Author Attend Time: Tuesday, May 17, Noon–1:00 p.m.

Arrangers: M. Harper, NIOSH, Morgantown, WV; P. Gomer, INTS, Vandoeuvre, France.


**WD 504-2 Occupational Exposure to Polycyclic Aromatic Hydrocarbons in Wood Dust.** K. Huynh, E. Dansiman, P. Schupfer, B. Danuser, Institute for Work and Health, Lausanne, Switzerland.
WD 504-3 Determinants of Monoterpene Exposure in the Danish Furniture Industry. K. Hagström, Department of Occupational and Environmental Medicine, Örebro, Sweden; G. Jacobsen, T. Sigsgaard, V. Schlünsen, Department of Environmental and Occupational Medicine, Aarhus, Denmark; I. Schaumburg, Neuro Centre, Aarhus, Denmark; M. Erlandsen, Department of Biostatistics, Aarhus, Denmark.


WD 504-5 Gallic Acid Used as a Chemical Marker in Assessing Oak Dust Exposure. G. Bartolucci, P. Maestrelli, V. Lodde, M. Carieri, M. Scapellato, F. Salamon, G. Gori, University of Padua, Padova, Italy.


WD 504-7 Wood Solid Exposure Analysis in Dust from Industrial Wood Processing Facilities by Diffuse Reflectance Infrared Fourier Transform Spectroscopy. C. Kwon, R. Rando, Tulane University, New Orleans, LA.

WD 504-8 Evaluation of the Haz-Dust IV (EDC) Real-Time Dust Monitor for Thoracic Sampling of Wood and Other Construction Dusts. S. Srimeechai, R. Rando, Tulane University, New Orleans, LA.


Poster Sessions 405 — Graduate and Undergraduate Students
Author Attend Time: Wednesday, May 18, 10:00 a.m.–Noon
Graduate and undergraduate students present to discuss research and answer questions.

All posters are open for viewing 9:00 a.m., Monday, May 16 through 1:00 p.m., Wednesday, May 18.
Special Exhibit in the Expo

AIHe 2011 Clandestine Drug Lab Exhibit, Booth #1759
Display provided by AIHA's Clan Lab Working Group

AIHA once again features a mock clandestine drug lab display that focuses on hazards associated with the production of illicit drugs such as methamphetamine and marijuana indoor grow operations. Representatives from Multnomah County Sheriff and Gresham Fire Department will be on hand to demonstrate how they approach, monitor and mitigate health hazards associated with clandestine drugs. Tactical response and decontamination trailers will be on display along with a self guided display educating visitors on clandestine drug laboratory hazards.

Expenses: Highlights

Oregon Convention Center, Halls B–E

Expo Hours
Monday, May 16, 9:00 a.m.–5:30 p.m.
Tuesday, May 17, 9:00 a.m.–3:00 p.m.
Wednesday, May 18, 9:00 a.m.–1:30 p.m.

Expo Opening Cocktail Reception
Monday from 4:00 p.m.–5:30 p.m. Bring your complimentary drink ticket from your registration packet.

Prizes – Prize Booth #1656
Complete the prize drawing form in your program addendum and drop it in the prize bins in Prize Booth. Monday Tuesday will feature drawings for money and free registrations to AIHe 2012 in Indianapolis, IN.

Passport to Prizes – Prize Booth #1656
Have your passport stamped by participating exhibitors, and drop your entry at the Prize Booth #1656 by noon, Wednesday. Winning names will be drawn at 12:30 p.m. on Wednesday. The Grand Prize is a trip to AIHe 2012 in Indianapolis, IN. 2nd Prize is $1,000.

Expo Theater: Product Demos and Presentations, Hall D

Monday, May 16
See presentation descriptions on pages 36 and 41.
10:00 a.m.
A New Passive Sampler for Low Level VOC Measurements, SKC
10:30 a.m.
3E Mobile: Putting MSDS Management in the Palm of Your Hand, 3E Company
11:30 a.m.
When the Dust Settles: A Brief Tutorial on Combustible Dust and Preventive Housekeeping, Nilfisk Industrial Vacuums
Noon
Area Monitoring Sampling Kit to Collect Multiple Airborne Contaminants from Chemical/Petroleum Spills, Galson Laboratories
12:30 p.m.
New, Mobile and Wireless Area Monitoring and Fence Line System, Draeger Safety, Inc.
1:00 p.m.
QuadMode™ Air Sampling Technology Found in the Gilian GilAir Plus, Sensidyne, LP
1:30 p.m.
Get Aggressive with Microbial Air Sampling — A New Approach to Improve Data Consistency and Interpretation, Mycometer, Inc.

Tuesday, May 17
See presentation descriptions on pages 52 and 59.
9:30 a.m.
Creating a Calibrated Exposure Chamber to Verify the Performance of Air Samplers and Respirator Cartridges, Assay Technology Inc./AT Labs/Miller Nelson (MNR)
10:00 a.m.
New Products Developments in XRF Analysis, Thermo Scientific — Air Quality Instruments and Niton Analyzers
Noon
New Products Developments in XRF Analysis, Thermo Scientific — Air Quality Instruments and Niton Analyzers
12:30 p.m.
Explosion Proof/Dust Ignition Proof Vacuum Cleaner System, Tiger-Vac Inc.
1:00 p.m.
QuadMode™ Air Sampling Technology Found in the Gilian GilAir Plus, Sensidyne, LP
1:30 p.m.
Revolutionary Wireless Solution for Whole-body and Hand-arm Vibration Exposure Assessment per ACGIH® TLV Guidelines and ANSI S2.70-2006, Casella CEL Inc.

Wednesday, May 18
See presentation descriptions on pages 68 and 72.
9:30 a.m.
Mercury Tracker 3000IP — Real Time, Continuous Reading Mercury Vapor Analyzer, Mercury Instruments USA
10:00 a.m.
Reducing Strains, Sprains and Repetitive Stress Injuries with a Proven Best Management Practice — Active Release Techniques, ART Corporate Solutions
Noon
Gasmet Model DX-4030, World's First Truly Portable FTIR Multi-Component Gas Analyzer, Gasmet Technologies Inc.
12:30 p.m.
GrayWolf’s AdvancedSense™ Meter, Innovative IH/IAQ Data Collection, GrayWolf Sensing Solutions

94  AIHe 2011 | Final Program
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- **Galson Laboratories**
  - AIHA International Reception, Booth 735

- **GrayWolf Sensing Solutions**
  - Standing Sign, Booth 734

- **Industrial Scientific**
  - Passport to Prizes, Expo Card, Booth 1835

- **Johns Hopkins Bloomberg School of Public Health**
  - Final Program, Booth 2154

- **Liberty Mutual Insurance Co.**
  - Passport to Prizes, Booth 1029

- **Library and Liberty Mutual**
  - Public Sign, Booth 1129

- **MAA**
  - MAA/AIHA\(^{+}\) Reception, Booth 1937

- **NuAIRE Inc.**
  - AIHce Email, Final Program, Booth 918

- **Owens & Minor**
  - Passport to Prizes, Booth 1314

- **Pathology West**
  - Passport to Prizes, Booth 1102

- **Sensidyne, L.P.**
  - Lanyard, Booth 1135

- **Sensidyne, Inc.**
  - Lanyard, Booth 1136

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- **SRS**
  - Passport to Prizes, Booth 1314

- **SRS**
  - Passport to Prizes, Booth 1314

- **SKC Inc.**
  - AIHce Banner Rotations, Final Program, Booth 1635

- **Thermo Scientific - Air Quality Instruments & Niton Analyzers**
  - Row 1200 Aisle Sign, 3 Standing Signs, Booth 1227

- **United Phosphorus Limited**
  - Opening & General Sessions, Booth 1845

- **Zefon International, Inc.**
  - Digital Signage, Booth 1943

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**Information + Activities**

**Education**

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**Floor Plans + Indices**

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640  The Ergonomics Center
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925  Arizona Instrument, LLC
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928  Columbia Analytical Services, Inc.
929  Labconco Corp.
934  PathCon Laboratories
935  Assay Technology, Inc./AT Labs/Miller Nelson (MNR)
936  NARDa Safety Test Solutions
941  RTI International
942  E.A.R., Inc.
943  Transamerica Retirement Management
944  Oregon OSHA
947  Fiberlock Technologies, Inc.

### Aisle 1000
1024  Working Concepts, Inc.
1025  Silvent North America
1026  Kinetics Noise Control
1027  U.S. Dept. of Housing and Urban Development: Office of Healthy Homes and Lead Hazard Control
1028  Board of Certified Safety Professionals (BCSP)
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1119  Alliant
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1235  EMSL Analytical, Inc.
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1243  A.P. Buck, Inc.
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1248  Environmental Reports
1251  AIHA Registry Programs, LLC
1253  AIHA Proficiency Analytical Testing Programs, LLC

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1314  Raco Rents
1318  Emikort
1320  CPLab Safety
1321  Argus Pacific
1322  GRAS Sound & Vibration
1323  Complete Equity Markets, Inc.
1327  BUREAU VERITAS NORTH AMERICA, INC.
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1340  DataChem Software, Inc.
1341  Actio Corporation
1342  Safetec
1343  Spiramid, LLC
1350  MSDSpro LLC
1352  SAP America
1354  ChemWatch NA

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1420  Contour Design Inc.
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1422  DCM Clean-Air Products, Inc.
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1451  KMI
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1457  Voluntary Protection Programs Participants’ Association, Inc. (VPPPA)
1459  ChemSW, Inc.
Aisle 1500
1513 AirClean Systems
1514 Environics USA
1518 Crowcon Detection Instruments, Ltd.
1519 Lab Safety Supply
1521 American Heart Association
1527 Interactive Safety Products, Inc.
1534 DuPont
1535 Draeger Safety Inc.
1540 Showa Best Glove, Inc.
1542 Indoor Biotechnologies, Inc.
1546 RMD Instruments
1547 Dakota Software Corporation
1549 Advanced Calibration Designs
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<tr>
<td>RT 206 AIHA Value Strategy Session on Case Studies</td>
<td>Monday</td>
<td>10:30 a.m.–1:00 p.m.</td>
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<tr>
<td>PO 110 Management and Training Issues: Communication</td>
<td>Monday</td>
<td>2:00 p.m.–5:00 p.m.</td>
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<tr>
<td>RT 214 OSHA’s Injury and Illness Prevention Program Rulemaking</td>
<td>Monday</td>
<td>2:00 p.m.–6:00 p.m.</td>
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<tr>
<td>RT 227 Integrated Solutions in Sustainable Occupational Health and Safety Management Systems</td>
<td>Tuesday</td>
<td>2:00 p.m.–6:00 p.m.</td>
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<tr>
<td>RT 232 Ethical Decision-Making in Sustainability and Management Systems</td>
<td>Wednesday</td>
<td>10:00 a.m.–Noon</td>
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<tr>
<td>RT 238 Using Computer Applications to Demonstrate the IH Business Case as Part of the Value Strategy</td>
<td>Wednesday</td>
<td>1:00 p.m.–3:30 p.m.</td>
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<tr>
<td>PO 106 Biosafety and Environmental Microbiology I — Allergens, Fungi, and IEQ: What’s New?</td>
<td>Monday</td>
<td>2:00 p.m.–4:20 p.m.</td>
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<tr>
<td><strong>Nanotechnology</strong></td>
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<tr>
<td>RT 205 US Chemical and Occupational Health Regulation and Policy for Engineered Nanomaterials</td>
<td>Monday</td>
<td>10:30 a.m.–12:30 p.m.</td>
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<tr>
<td>RT 212 Nanotechnology: Advances in Medical Surveillance and Occupational Health</td>
<td>Monday</td>
<td>2:00 p.m.–6:00 p.m.</td>
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<td>RT 215 Ask the Expert: An Update on the NIOSH Nanotechnology Research Program</td>
<td>Tuesday</td>
<td>10:30 a.m.–12:30 p.m.</td>
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<tr>
<td>RT 234 Risk Assessment Applied to Engineered Nanomaterials: Managing Risk with Limited Data</td>
<td>Wednesday</td>
<td>10:00 a.m.–Noon</td>
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<tr>
<td>PO 129 Nanotechnology: Assessment and Control</td>
<td>Wednesday</td>
<td>5:00 p.m.–7:00 p.m.</td>
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<td><strong>Noise</strong></td>
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<tr>
<td>PO 104 Noise Protection, Training, Measurement and Reduction</td>
<td>Monday</td>
<td>10:30 a.m.–12:30 p.m.</td>
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<tr>
<td>RT 209 Environmental Noise: 35 Years and Counting — Implications for Industrial Hygiene</td>
<td>Monday</td>
<td>2:00 p.m.–5:00 p.m.</td>
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<tr>
<td>RT 222 Fit Testing Hearing Protection Devices: Technology, Application, and Implementation</td>
<td>Tuesday</td>
<td>2:00 p.m.–4:30 p.m.</td>
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<td>RT 250 Prevention Through Design — Construction and Noise</td>
<td>Thursday</td>
<td>8:00 a.m.–Noon</td>
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<tr>
<td><strong>Nonionizing Radiation</strong></td>
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<tr>
<td>RT 201 Case Studies on Nonionizing Radiation</td>
<td>Monday</td>
<td>10:30 a.m.–12:30 p.m.</td>
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<tr>
<td>PO 119 All Things Radiation</td>
<td>Wednesday</td>
<td>10:00 a.m.–Noon</td>
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<tr>
<td><strong>Occupational Epidemiology</strong></td>
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<tr>
<td>RT 212 Nanotechnology: Advances in Medical Surveillance and Occupational Health</td>
<td>Monday</td>
<td>2:00 p.m.–6:00 p.m.</td>
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<tr>
<td>SS 002 Emerging Exposure Assessment Methods for Occupational Epidemiology Studies</td>
<td>Tuesday</td>
<td>2:00 p.m.–4:30 p.m.</td>
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<td>PO 126 Reconstruction of Exposures: Methods and Application</td>
<td>Wednesday</td>
<td>1:00 p.m.–3:40 p.m.</td>
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<td><strong>Occupational Medicine</strong></td>
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<tr>
<td>RT 256 Respiratory Protection in Healthcare: Changing Standards and Best Practices</td>
<td>Thursday</td>
<td>1:00 p.m.–4:30 p.m.</td>
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<tr>
<td><strong>Protective Clothing and Equipment</strong></td>
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<tr>
<td>PO 114 Personal Protective Clothing and Equipment</td>
<td>Tuesday</td>
<td>10:30 a.m.–12:50 p.m.</td>
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<td>RT 240 The NIOSH Personal Protective Technologies Program</td>
<td>Wednesday</td>
<td>1:00 p.m.–4:00 p.m.</td>
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<tr>
<td>Emerging Issues Forum 2 — Personal Protective Technologies Standards and Conformity Assessment</td>
<td>Thursday</td>
<td>8:00 a.m.–10:00 a.m.</td>
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<td><strong>Real-time Detection Systems</strong></td>
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<tr>
<td>PO 111 Field Detection, Sampling and Analysis: Real Time Detection Systems</td>
<td>Tuesday</td>
<td>10:30 a.m.–12:30 p.m.</td>
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<tr>
<td>RT 252 Field-Portable and Mobile Analysis and Testing: Developing and Documenting Competencies</td>
<td>Thursday</td>
<td>1:00 p.m.–3:30 p.m.</td>
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<tr>
<td><strong>Respiratory Protection</strong></td>
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<tr>
<td>RT 210 Living with Differences: Addressing Standards for Respirator Selection/Use Worldwide</td>
<td>Monday</td>
<td>2:00 p.m.–5:00 p.m.</td>
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<tr>
<td>PO 116 Respiratory Protection I</td>
<td>Tuesday</td>
<td>2:00 p.m.–5:00 p.m.</td>
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<td>PO 124 Respiratory Protection IL</td>
<td>Wednesday</td>
<td>11:00 a.m.–12:40 p.m.</td>
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<tr>
<td>RT 240 The NIOSH Personal Protective Technologies Program</td>
<td>Wednesday</td>
<td>1:00 p.m.–4:00 p.m.</td>
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<tr>
<td>RT 256 Respiratory Protection in Healthcare: Changing Standards and Best Practices</td>
<td>Thursday</td>
<td>1:00 p.m.–4:30 p.m.</td>
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</table>
### Indices: Technical Program by Topic

#### Risk Assessment

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Day</th>
<th>Time</th>
<th>Location</th>
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<tbody>
<tr>
<td>RT 202</td>
<td>Essential Hazardous Materials and Emergency Response Resources and Tools for the IH</td>
<td>Mon</td>
<td>10:30 a.m. – 12:30 p.m.</td>
<td>39</td>
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<tr>
<td>PO 109</td>
<td>Risk Assessment — Case Studies</td>
<td>Mon</td>
<td>2:00 p.m. – 5:00 p.m.</td>
<td>43</td>
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<tr>
<td>PO 113</td>
<td>Risk Management — Planning and Prevention</td>
<td>Tue</td>
<td>10:30 a.m. – 12:30 p.m.</td>
<td>55</td>
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<tr>
<td>RT 219</td>
<td>Today's Global Chemical Regulatory Shifts: Are We Leading or Following?</td>
<td>Tue</td>
<td>10:30 a.m. – 12:30 p.m.</td>
<td>56</td>
</tr>
<tr>
<td>RT 221</td>
<td>Addressing the Hazards of New and Emerging Issues within the Workplace</td>
<td>Tue</td>
<td>2:00 p.m. – 4:30 p.m.</td>
<td>60</td>
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<tr>
<td>RT 234</td>
<td>Risk Assessment Applied to Engineered Nanomaterials: Managing Risk with Limited Data</td>
<td>Wed</td>
<td>10:00 a.m. – Noon</td>
<td>71</td>
</tr>
<tr>
<td>SS 003</td>
<td>New Paradigms for Exposure and Risk Assessment: Taking Alternative Temporal Exposure Patterns to Task</td>
<td>Wed</td>
<td>1:00 p.m. – 3:30 p.m.</td>
<td>76</td>
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<tr>
<td>PO 128</td>
<td>Risk Assessment — Methods and Applications</td>
<td>Wed</td>
<td>5:00 p.m. – 7:00 p.m.</td>
<td>79</td>
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#### Safety

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Day</th>
<th>Time</th>
<th>Location</th>
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<tbody>
<tr>
<td>CR 301</td>
<td>Changing a Safety Culture: How Leadership and Front-Line Think</td>
<td>Mon</td>
<td>10:30 a.m. – 11:30 a.m.</td>
<td>37</td>
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<tr>
<td>CR 302</td>
<td>Conflict Management and Resolution for Safety Professionals</td>
<td>Mon</td>
<td>10:30 a.m. – 11:30 a.m.</td>
<td>37</td>
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<tr>
<td>CR 303</td>
<td>Dust Explosion Hazard Assessment — Including OSHA Combustible Dust National Emphasis Program</td>
<td>Mon</td>
<td>11:30 a.m. – 12:30 p.m.</td>
<td>40</td>
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<tr>
<td>PO 108</td>
<td>General Topics in Occupational Safety</td>
<td>Mon</td>
<td>2:00 p.m. – 4:40 p.m.</td>
<td>42</td>
</tr>
<tr>
<td>CR 306</td>
<td>Emergency Management and EHS: We've Come a Long Way in 10 Years</td>
<td>Mon</td>
<td>3:30 p.m. – 4:30 p.m.</td>
<td>46</td>
</tr>
<tr>
<td>CR 308</td>
<td>Hazardous Materials Shipping And Transportation</td>
<td>Tue</td>
<td>10:30 a.m. – 11:30 a.m.</td>
<td>54</td>
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<tr>
<td>CR 309</td>
<td>Safety Culture: Motivation and Influence</td>
<td>Tue</td>
<td>10:30 a.m. – 11:30 a.m.</td>
<td>54</td>
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<tr>
<td>CR 310</td>
<td>OSHA Construction and General Industry Standards: Why You Need to Understand Both</td>
<td>Tue</td>
<td>11:30 a.m. – 12:30 p.m.</td>
<td>58</td>
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<tr>
<td>CR 311</td>
<td>Culture and Exposure Control</td>
<td>Tue</td>
<td>2:00 p.m. – 3:00 p.m.</td>
<td>60</td>
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<tr>
<td>RT 225</td>
<td>NFPA 70E — Understanding Requirements, Relationships and Responsibilities</td>
<td>Tue</td>
<td>2:00 p.m. – 4:30 p.m.</td>
<td>61</td>
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<tr>
<td>CR 315</td>
<td>OSHA Local and National Emphasis Program Inspections — How Companies Can Get Prepared</td>
<td>Wed</td>
<td>10:00 a.m. – 11:00 a.m.</td>
<td>68</td>
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<tr>
<td>CR 316</td>
<td>PSM, RMP and CalARP Update and Resources for Employers</td>
<td>Wed</td>
<td>11:30 a.m. – 12:30 p.m.</td>
<td>72</td>
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<tr>
<td>CR 318</td>
<td>Utilizing ANSI B11 for Machine Guarding Risk Assessment: Achieving Acceptable Risk</td>
<td>Wed</td>
<td>1:00 p.m. – 2:00 p.m.</td>
<td>74</td>
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<tr>
<td>RT 241</td>
<td>OSHA’s I2P2: Should I be Worried?</td>
<td>Wed</td>
<td>1:00 p.m. – 4:00 p.m.</td>
<td>77</td>
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<tr>
<td>CR 319</td>
<td>Slip Simulator Training — Slip-Trip-Fall Prevention</td>
<td>Wed</td>
<td>2:30 p.m. – 3:30 p.m.</td>
<td>78</td>
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<tr>
<td>CR 321</td>
<td>The Aging Workforce: Occupational Safety, Health, Hygiene and Wellness Considerations</td>
<td>Wed</td>
<td>5:00 p.m. – 6:00 p.m.</td>
<td>78</td>
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<tr>
<td>CR 322</td>
<td>Effective Operational EHS Metrics Reviews: Rhythms, Processes and Driving Results</td>
<td>Thu</td>
<td>8:00 a.m. – 9:00 a.m.</td>
<td>83</td>
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<tr>
<td>CR 324</td>
<td>Accountability and Discipline in Safety: A Complementary Approach</td>
<td>Thu</td>
<td>1:00 p.m. – 2:00 p.m.</td>
<td>87</td>
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<tr>
<td>CR 325</td>
<td>How to Develop and Sustain an Effective Accident Investigation Program</td>
<td>Thu</td>
<td>2:30 p.m. – 3:30 p.m.</td>
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#### Sampling and Lab Analysis

<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Day</th>
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<tr>
<td>RT 216</td>
<td>Federal Environmental Lead Programs Update</td>
<td>Tue</td>
<td>10:30 a.m. – 12:30 p.m.</td>
<td>55</td>
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<tr>
<td>PO 127</td>
<td>New Issues in Biological and Chemical Sampling and Analysis</td>
<td>Wed</td>
<td>1:00 p.m. – 4:00 p.m.</td>
<td>76</td>
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<tr>
<td>RT 246</td>
<td>Sampling Strategies in Unusual IH Exposures</td>
<td>Thu</td>
<td>8:00 a.m. – 10:30 a.m.</td>
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#### Science Symposia

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<tr>
<td>SS 001</td>
<td>Inhalable Particles: The State of the Science on a Big Particle Problem</td>
<td>Mon</td>
<td>2:30 p.m. – 5:30 p.m.</td>
<td>46</td>
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<tr>
<td>SS 002</td>
<td>Emerging Exposure Assessment Methods for Occupational Epidemiology Studies</td>
<td>Tue</td>
<td>2:00 p.m. – 4:30 p.m.</td>
<td>61</td>
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<tr>
<td>SS 003</td>
<td>New Paradigms for Exposure and Risk Assessment: Taking Alternative Temporal Exposure Patterns to Task</td>
<td>Wed</td>
<td>1:00 p.m. – 3:30 p.m.</td>
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#### Social Concerns

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<tr>
<td>RT 230</td>
<td>A Conceptual Discussion on Safety and Health and Implications for the Workplace</td>
<td>Wed</td>
<td>10:00 a.m. – Noon</td>
<td>70</td>
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<tr>
<td>PO 131</td>
<td>Community Environmental Health</td>
<td>Thurs</td>
<td>8:00 a.m. – 11:20 a.m.</td>
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#### Stewardship and Sustainability

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<tr>
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<th>Day</th>
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<tr>
<td>RT 206</td>
<td>AIHA Value Strategy Session on Case Studies</td>
<td>Mon</td>
<td>10:30 a.m. – 1:00 p.m.</td>
<td>40</td>
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<td>RT 226</td>
<td>Green Chemistry — Opportunities for the Industrial Hygienist</td>
<td>Tue</td>
<td>2:00 p.m. – 5:00 p.m.</td>
<td>62</td>
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<tr>
<td>RT 232</td>
<td>Ethical Decision-Making in Sustainability and Management Systems</td>
<td>Wed</td>
<td>10:00 a.m. – Noon</td>
<td>70</td>
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<tr>
<td>RT 233</td>
<td>Incorporating Life Cycle Analysis in Business: Opportunities for the EHS Professional</td>
<td>Wed</td>
<td>10:00 a.m. – Noon</td>
<td>70</td>
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<tr>
<td>RT 242</td>
<td>REACH is Here: How and Where its Impact Will be Felt by IH Professionals</td>
<td>Wed</td>
<td>1:00 p.m. – 5:00 p.m.</td>
<td>78</td>
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<tr>
<td>RT 254</td>
<td>The GHS is Coming — Will You Be Ready?</td>
<td>Thurs</td>
<td>1:00 p.m. – 4:00 p.m.</td>
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#### Student and Early Career Professionals

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Day</th>
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<tbody>
<tr>
<td>RT 204</td>
<td>Taking the Mystery Out of Mentoring: Practical Tools to Make a Real Difference</td>
<td>Mon</td>
<td>10:30 a.m. – 12:30 p.m.</td>
<td>39</td>
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<tr>
<td>Luncheon Discussions — Students and Early Career Professionals</td>
<td>Mon</td>
<td>12:30 p.m. – 1:30 p.m.</td>
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<tr>
<td>RT 220</td>
<td>Perspectives on Preparation for the CIH Exam — Version 5.0</td>
<td>Tue</td>
<td>10:30 a.m. – 1:00 p.m.</td>
<td>57</td>
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<tr>
<td>RT 237</td>
<td>Making Changes: Embracing an Uncertain Future and Thriving</td>
<td>Wed</td>
<td>1:00 p.m. – 3:00 p.m.</td>
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#### Toxicology

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<th>Location</th>
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<tbody>
<tr>
<td>PO 118</td>
<td>Industrial Hygiene General Practice</td>
<td>Tue</td>
<td>2:00 p.m. – 6:00 p.m.</td>
<td>63</td>
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